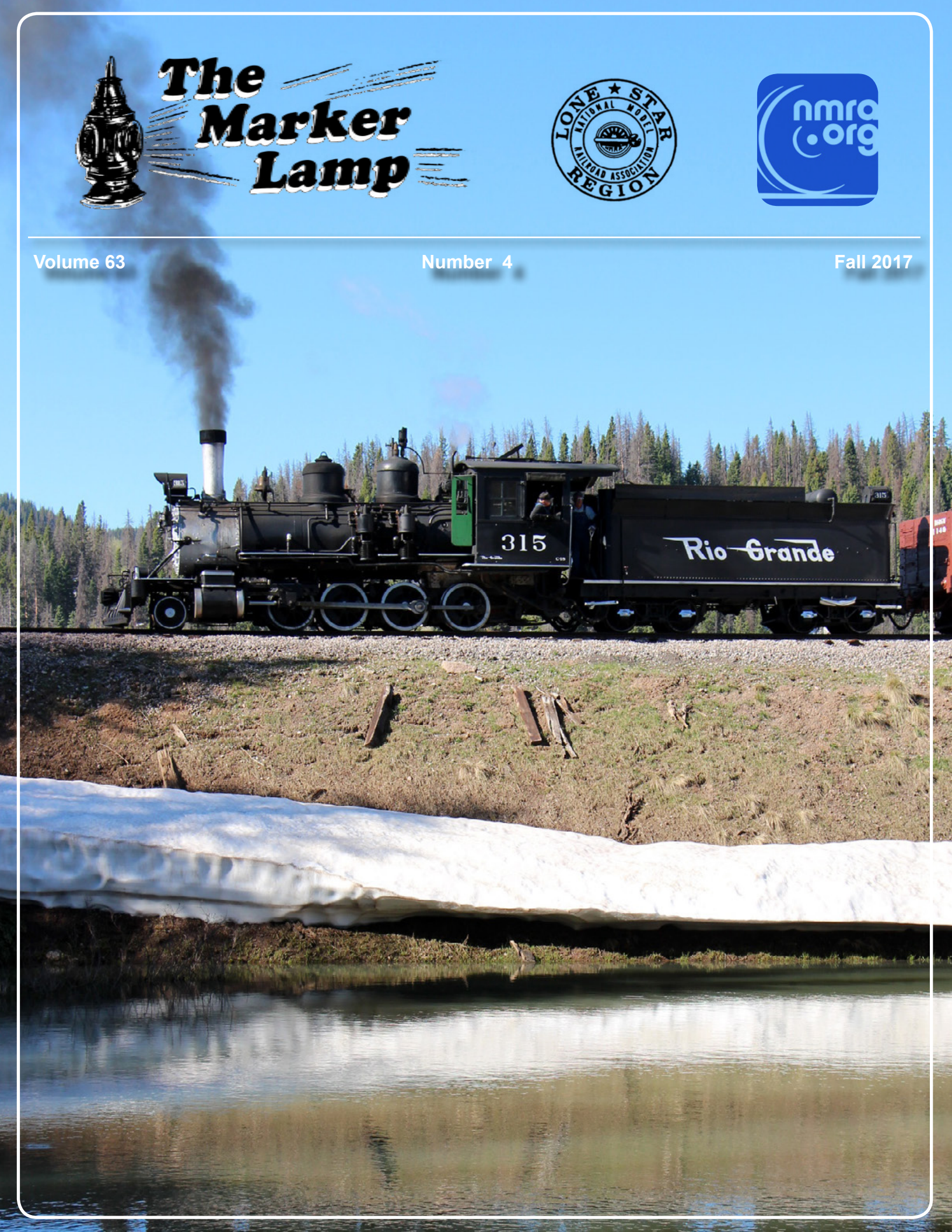
The Marker Lamp

Volume 63 Number 4 Fall 2017



The Marker Lamp

The Official Publication of
The Lone Star Region of the
National Model Railroad Association

Volume 63, Number 4

EDITOR
RILEY TRIGGS
1005 Robert E Lee Rd
Austin, Texas 78704-2026
512.636.3521
rileytriggs@gmail.com

ASSOCIATE EDITOR
GERT "SPEED" MULLER
lsrtreasurer@huntatrophy.com

ADVERTISING
GERT "SPEED" MULLER
lsrtreasurer@huntatrophy.com

Visit the LSR's web page at:
www.lonestarregion.com

The editorial policy of The Marker Lamp, the official publication of The Lone Star Region, shall be to contribute, wherever possible, to the promotion, growth and understanding of the hobby of Model Railroading, within the confines of good taste and responsibility. The Marker Lamp is published once each quarter by and for the members of The Lone Star Region of The National Model Railroad Association. Articles appearing in The Marker Lamp are the opinions of the authors and do not necessarily reflect the position or policies of the officers or membership of The Lone Star Region or The National Model Railroad Association.

Address all correspondence, news, photos and drawings to the editor. All material will be gladly accepted and will be used depending on the availability of space and suitability of material. None will be returned unless a stamped, self-addressed envelope is provided. Correspondence relating to Pike Ads and Dealer Ads should be addressed to Speed Muller gertmul@gmail.com

Cover photo
by Blake Bogs

Submission Deadlines & Advertising Closing Dates

Winter Issue.....January 15
Spring Issue .....April 15
Summer Issue .....July 15
Fall Issue.....October 15

Internet Post Date:
Approx. 30 Days After Deadline.
Materials received after the deadline will be held for the next issue.

Lone Star Region Call Board

LSR Officers

PRESIDENT
CHUCK LIND, MMR
3680 CR 324
Navasota, Texas 77868
(979) 219-3305
Chucklind46@gmail.com

VICE-PRESIDENT
BOB BARNETT
2925 Plumb Street
Houston, Texas 77005
(713) 660-8820
Barnett6@sbcglobal.net

SECRETARY
JEFF PALMER
2806 High Plateau Dr.
Garland, Texas 75044
(972) 495-2097
res06wqv@gte.net

BOARD ADVISOR
STEVE BARKLEY, MMR
2060 Belvedere Drive
Beaumont, Texas 77706
(210) 653-5947
baylormax@aol.com

TREASURER
GERT "SPEED" MULLER
lsrtreasurer@huntatrophy.com

SECRETARY-EMERITUS
EUNICE LINDA
3028 Cumberland
Waco, Texas 76707-1219
(254) 754-5535
jlinda@hot.rr.com

LSR Directors-At-Large

DIRECTOR-AT-LARGE
RILEY TRIGGS
1005 Robert E Lee Rd
Austin, Texas 78704
(512) 636-3521
rileytriggs@gmail.com

DIRECTOR-AT-LARGE
BLAKE BOGS
8202 Pine Thistle Ln.
Spring, TX 77379
713-254-7447
superchief1520@gmail.com

DIRECTOR-AT-LARGE
MARC LACHEY
2218 Blackberry Dr.
Richardson, TX 75082
214-507-7779
bu1977@att.net

LSR Division Directors

(1) COWCATCHER DIVISION
MIKE MACKEY
1633 Parkside Trail
Lewisville, Texas 75077
214-460-1329
director@cowcatcherdivision.org

(2) BAYOU DIVISION
ROD FREDERICKS
640 Chippenham Dr.
Baton Rouge, Louisiana 70808
(225) 766-8014
fredericks.rod@gmail.com

(3)TRINITY RIVER DIVISION
DONNA ORR
2625 Rolling Meadows Dr.
Rockwall, TX 75087
(972) 722-4769
dlo-rls@sbcglobal.net

(4) CEN-TEX DIVISION
PETER KAZMIR
2022 Foothills
Leander, TX 78641-2376
(512) 259-6720
director@centexnmra.org

(5) DIVISION
DAVE LAMBERTS
3717 95th Street
Lubbock, Texas 79423-3811
(806) 792-7244
DavidWL1944@aol.com

(6) DIVISION
KEVIN BERGEMAN
3318 Windy Ridge Ct
San Antonio, TX 78259-2607
(210) 488-4370
kevin.bergeman@gmail.com

(7) DIVISION
DON P. KIMMELL
9132 Mansfield Road
Shreveport, Louisiana 71118
(318) 798-7718
elf4kcs@mac.com

(8) TEXAS GULF DIVISION
JIM LEMMOND
2821 Frostwood Circle
Dickinson, Texas 77539
281-534-6179
281-229-0845
jimlem@verzion.net

LSR Chairs

ACHIEVEMENT PROGRAM
DUANE RICHARDSON, MMR
1122 Holland Drive
Garland, TX 75040
(972) 495-6375
duane@purgatoryanddevilriver.com

CONVENTION
MARC LACHEY
2218 Blackberry Dr.
Richardson, TX 75082
214-507-7779
bu1977@att.net

EVENTS
BILL DRYDEN
202 Tallwood Drive
Georgetown, Texas 78628
(469) 964-8571
bdr149@airmail.net

MEMBERSHIP CO-CHAIRMAN
MIKE MACKEY
1700 Desperado Road
Fort Worth, TX 76131
214-460-1329
mikemackey_tx@sbcglobal.net

EDUCATION CHAIR
BOB BARNETT
2925 Plumb Street
Houston, Texas 77005
(713) 660-8820
Barnett6@sbcglobal.net

NON-RAIL
VIRGINIA FREITAG
1835 Alta Vista
Houston, Texas 77023-2503
(713) 926-2993
v-gfreitag@comcast.net

PUBLICATIONS- *ML* EDITOR
RILEY TRIGGS
1005 Robert E Lee Rd
Austin, Texas 78704
(512) 636-3521
rileytriggs@gmail.com

HISTORIAN
BOB BARNETT
2925 Plumb Street
Houston, Texas 77005
(713) 660-8820
Barnett6@sbcglobal.net

WEB SITE-PUBLIC RELATIONS
JEFF PALMER
2806 High Plateau Dr.
Garland, Texas 75044
(972) 495-2097
res06wqv@gte.net

PARLIAMENTARIAN
RAY BYER
713-472-4599
raybyer@yahoo.com

YOUTH CHAIR
JIM LEMMOND
2821 Frostwood Circle
Dickinson, Texas 77539
281-534-6179
281-229-0845
jimlem@verzion.net

CONTEST CHAIR
LOREN NEUFELD, MMR
9821 Oboe Dr.
Houston, Texas 77025
713-666-8451
lorenmr@aol.com

NOMINATIONS CHAIR
BLAKE BOGS
8202 Pine Thistle Ln.
Spring, TX 77379
713-254-7447
superchief1520@gmail.com

PHOTOGRAPHY CHAIR
DAVE LAMBERTS
3717 95th Street
Lubbock, Texas 79423-3811
(806) 792-7244
DavidWL1944@aol.com

In This Issue

President's Message	3
Up the Tracks	6
...RRRduino	9
On the Shoulders of Giants	18
What's new in Free-Mo S Scale	24
Bayou City Limited Contest	22

President's Message

by Chuck Lind, MMR
Chucklind46@gmail.com

I made my yearly trip to the Narrow Gauge Convention in August, along with a couple of friends Don Formanek and David Fritsche. Since the convention was in Colorado, we took an extra 10 days to travel the railroad sites before the convention. Our first stop in Colorado was in Denver to drop off a model I had built for the contest for safe keeping with a friend. I didn't want to bouncing around the back of the truck for the rest of the trip.

We then headed to the Royal Gorge to ride the train through the gorge, a trip I would highly recommend. We did this the day of the eclipse. From there we headed down to Chama for a little train chasing. Then I started receiving phone calls from friends and relatives asking if things were OK. Of course I am OK, I am in Colorado chasing and riding trains! What Hurricane? This changed the rest of the trip. We kept up the trip as planned, but with more attention paid to the weather channel and more frequent calls home to Texas.

I started to get reports on how things were in Houston and the surrounding areas. Things didn't look good 22" of rain in one day is not good. As I am writing this, most of the Houston layouts weathered the storm, but I can't say the same for the owners.

Jim Lemmond, Division 8 Director, had close to 36" of water in his house. Jim and his wife were evacuated by boat. The Galveston Railroad museum received some water damage and I have heard that some of our members in the Beaumont area also received damage. In talking with NMRA President Charlie Getz, helping folks hurt by disasters is not part of their priority, but anyone in the NMRA that wants to help can. With this, Division 1 of the Lone Star Region has added a link to their web page (www.cowcatcherdivision.org) for anyone that would like to contribute to this cause. While the NMRA and the LSR cannot endorse this as part of their overall plan, feel free to contribute if you would like to help other modelers. If you were hurt by the storm and are needing help, there is also a link at the same web site to apply for help. Please keep these fellow modelers in your prayers over this long recovery.

Austin has stepped up to host the 2018 LSR Convention. It will be held at the same hotel in Round Rock which has been a great venue for our conventions in the past. Please help the host group by registering and making your hotel reservations early. I look forward to seeing everyone there.

Marc LaChey has been busy trying to secure a location for the 2019 convention. Future conventions will be one of the main topics at the LSR Mid-Year Board meeting in January. We need to be 2-3 years out in planning for a convention in order to receive the best possible rates. If your area is interested in hosting a convention please contact Marc. It doesn't have to be in a big city, and Marc and the Board have the resources to help you with the planning of a convention think about the areas we haven't been to in several years … Amarillo, San Antonio, Baton Rouge, New Orleans. Marc is also looking at the possibility of having a joint convention with another region.

The November layout tours in Houston and surrounding areas will be each weekend in November and into the first weekend of December. Now I have a deadline so it's time to get busy cleaning the layout for the tour. About the model I took to the convention, I built the sawmill at Long Leaf, LA as it was in 1939, it won First Place and Best In Show, so it also needs to be installed before the tour.

Thanks for all you do for this great hobby.

Depot under duress

by Riley Triggs
rileytriggs@gmail.com
ponyrr.blogspot.com
modelrailroaddesign.blogspot.com

The abandoned ATSF depot in Snyder, Tx

Column detail with iron corner guards

The uniquely constructed and architecturally significant 1911 Santa Fe depot in Snyder, Tx is a real railroading gem. The depot, along with the recently refurbished depot in Post, Tx, are the two remaining of the original four of this design. The other two were in Lubbock, lost to fire, and Sweetwater, lost to demolition. The fate of the Snyder depot seems to be demolition, but as of October 7th, the BNSF Railway reports plans to demolish are on hold.

All four of these depots were designed by Kansas City architect, Canadian-born Louis S. Curtiss (1865-1924). He is best known as a creator of the first curtain wall office building, the Boley Clothing Company Building of Kansas City. He was also co-architect of the Terrant County Courthouse in Fort Worth, which is a fine example of Renaissance Revival.

Curtiss designed over 200 works of architecture and many were in an innovative, yet idiosyncratic design style that is also found in the Snyder depot.

His unique style was informed by the traditions of 19th century building coupled with the freedom of expression afforded by 20th century materials. He combines Art Nouveau, the Arts & Crafts Movement, and the Prairie Style of Frank Lloyd Wright for an original and bold interpretation of important architectural movements.

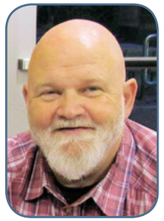
All four depots feature reinforced concrete construction with an unusual glazed pre-cast concrete veneer block system. Plans for relocating the depot were called off when it was determined that the concrete system that makes it unique would not survive the process of moving.

Of course it would be a cultural loss to have this building demolished, so local and state preservation efforts continue to work towards finding a way that this building can be saved.

For news updates and links to these efforts as well as an online petition can be found at the Preservation Texas website.

Riley

Up the Tracks Events Calendar



By Bill Dryden
NMRA & LSR Life Member

Here are upcoming events within the LSR of which I am aware. I will provide all the information YOU send me or I can glean from other publications, websites, etc., for these events. Additional information may be available through the NMRA Scale Rails and/or various trade magazines or various websites. Also, note that all show times and dates are at the discretion of the sponsoring organization and are subject to change. Please forward any and all information about upcoming events or activities in your area, club, etc.
to me via e-mail at bdr149@airmail.net.

Lone Star Region 67th Annual Convention (2018)
Arriving Soon, the Austin Eagle, the 2018 NMRA Lone Star Region Convention!
June 13-17, 2018; Wingate by Windham Hotel and Conference Center; Round Rock, TX
More information at https://austineagle.org/ or http://www.lonestarregion.com/
Come all!!
PARTICIPATE!!!

RECURRING EVENTS AND MEETINGS

LSR Division 3 - Northeast Texas Division – Allen
The Trinity River Division meets on the Second Saturday of every month at Christ the Servant Lutheran Church, Allen. Occasionally the day or branch changes due to scheduling conflicts so pay close attention to the e-mail meeting notices that go out a week before the meeting. If you would like to be added to the e-mail list contact Jerry Hoverson at JKHoverson@gmail.com.

LSR Division 4 – Cen-Tex Division – Austin
The Cen-Tex Division meets bi-monthly at the Austin Northwest Recreational Center, 2913 Northland Drive, Austin, TX. Meetings are held at 10:00 am on the Second Saturday of the odd months and include clinics, show-and-tell, DCC minute, social activities and a layout open house. For more information about upcoming meetings, see http://centexnmra.org or contact director@centexnmra.org to be added to the mail list.

LSR Division 8 - Texas Gulf Division – Houston
The Texas Gulf Division presents hands-on-clinics every second Saturday of each month at the Bayland Center, 6400 Bissonnet, Houston. The clinic times are 10:00 a.m. to 12:00 p.m. All are welcome. To be added to the Division 8 mailing list contact Jim Lemmond at jimlem@comcast.net. The Division 8 web site is http://texasgulfdivision.org/

Alamo Model Railroad Engineers - San Antonio
The Alamo Model Railroad Engineers meets the 2nd Friday of the month at 7:30 p.m. in the Zucht Building at the Texas Transportation Museum, 11791 Wetmore Rd., San Antonio TX. For more information call Peter Shavney (210) 317-3661 or Gene Turner (210) 355-2777; or visit the web site www.alamomodelrailroadengineers.com.

Houston Area Live Steamers
HALS has over 9,000 feet of track for you to enjoy and ride on most any Saturday of the year. Someone is usually there every Saturday with special run, operations, waybills/timetable, work and fun run days scheduled throughout the year. Our public run days are the third Saturday of the month March through November. Come see our 2,500 foot expansion in Phase 4. Model Railroaders (any scale) are welcome to attend most any time. Check our web site out at www.hals.org for schedule of events or e-mail Rick White – rick.white.jr@gmail.com for more information.

North Texas Council of Railroad Clubs – Irving
The North Texas Council of Railroad Clubs (NTC) meets the 3rd Tuesday of the month. Visit the website www.dfwtrainshows.com for more information about the NTC, its meeting site or member clubs.

New Braunfels Railroad Museum
Kids Fun Day is held on the 1st and 3rd Saturday of each month, 10:00 am to 2:00 pm. New Braunfels Railroad Museum, 302 South San Antonio Street, in the 1907 Restored Railroad Depot; New Braunfels, TX. Museum phone (830) 627-2447. Kids of all ages will have the opportunity to run model trains and become a Jr. Engineer. Also among the displays at the Kids Fun Day will be a large US Army Model Garden (G) Scale and Lego Trains. Visit our Steam Engine, Caboose, Dining Car (available for Birthday Parties) and Box Car. There will be other fun, train related activities, additional model trains, train artifacts, our 1907 depot are on display. The Railroad Museum opens at 10:00 am on Saturdays. For field trip scheduling and more information, call Howard Young (210) 542-6121, or visit us at www.nbrrm.org.

Texas Western Model Railroad Club – Forest Hills
The Texas Western Model Railroad Club meets for its business meeting every 1st Thursday of the month at 7:00 PM. The Club is located at 6808 Forest Hills Drive, Forest Hills, TX. For more information: (682) 587-2092 or www.twmrc.org or email cdo@twmrc.org.

Texas Northern Model Railroad Club – Plano
The Texas Northern Model Railroad Club business meeting is the 1st Thursday of the month and for regular meetings on Thursday evenings and most Saturdays. If you like to operate, come by on Tuesday nights to check on our progress in setting up operations. Located in Colin Creek Mall, Plano, TX, outside JC Penney's on the lower level. For more information: www.modelrailroadclub.org.

EVENTS AND SHOWS

November- December

Nov. 24th – 26th; Dec. 1st – 3rd, 8th – 10th 7th Annual Holiday Toy Trains at the Depot. Fri. – Sat. 10:00 a.m. to 6:00 p.m., Sun. 12:00 a.m. to 5:00 p.m. Admission: Free. Nacogdoches Train Depot, 101 Old Tyler Road, Nacogdoches, TX.

November- January

Nov. 18th – Jan. 7th Ronald McDonald Trains at Northpark Mall. Mon. – Sat. 10:00 a.m. to 9:00 p.m., Sun. 11:00 a.m. to 7:00 p.m. Adults $7, Kids 2–12 $4, Kids under 2 Free, Seniors 65+ $4. Northpark, Dallas, TX.
More information: http://www.thetrainsatnorthpark.com/.
(Multiple Date Event)

Nov. 25th; Dec. 9th, 16th & 17th; Jan. 6th Crescent City Model Railroad Club – Open House. 11:00 a.m. to 5:00 p.m. Admission donation is: Adults $7, Children 6–12 $3.00, Children 5 and under Free. 601 N. Lester Ave, Metairie, LA. More information: call (504) 737-3723, e-mail: crescentcitymodelrrclub@gmail.com or www.ccmrc.com.

December

1st Kansas City Southern RR, Holiday Express. Train tour starts @ 4:00 PM; No set end time unless listed on official schedule. Admission: Free. KCS RR Yard, 4500 North Lake Shore Drive, Shreveport, LA. More information: http://www.kcsouthern.com/corporate-responsibility/giving/holiday-express.

2nd – 23rd Christmas at the Museum. Tues. – Fri. 10:00 a.m. to 4:00 p.m., Sat. 10:00 a.m. to 2:00 p.m. (Closed Sun. & Mon.). Adults $5, Seniors $2, Kids Under 18 $1, Museum Members Free. 214 N. Fredonia Street, Longview, TX.
More information: (903) 753-5840 or http://gregghistorical.org/

9th – 10th Great Texas Train Show. 10:00 a.m. to 4:00 p.m. Onsite Adult Admission is $2.00 (Good for both days) (Admission is free with online coupon, $2.00 at the door without a coupon). Premier Events Center, Lakeland Plaza, 1165 S Stemmons Fwy, Lewisville, TX.
More information: http://trainshow.com/greattexastrainshow/

January 2018

18th – 19th 14th Annual Southwestern Rail Conference. Thur. 2:00 p.m. to 5:00 p.m., Fri. 2:00 pm to 4:00 p.m. Admission: "Check website." Magnolia Hotel Dallas Park Cities, 6070 North Central Expressway, Dallas, TX (Across from SMU & Bush Presidential Library) TX. For more information: Bernie Rodriquez (469) 569-0136, bernie@texasrailadvocates.org, or www.texasrailadvocates.org.

20th – 21st Dallas Area Annual Winter Train Show (Sponsored by the North Texas Council of Railroad Clubs) Sat. 10:00 a.m. to 5:00 p.m., Sun. 10:00 am to 4:00 p.m. Adults $8, Kids Under 12 Free with Paid Adult Admission, Scouts & Scout Leaders in Uniform, Admission is Free. Plano Centre; 2000 East Spring Creek Parkway; Plano, TX. For more information: www.dfwtrainshows.com.

February

3rd – 4th The World's Greatest Hobby on Tour. Sat. 10:00 a.m. to 6:00 p.m., Sun. 10:00 am to 5:00 p.m. Adults TBA, Kids 15 and under Free. NRG Park Arena, 1 NRG Park, Houston, TX. For more information: http://wghshow.com/hou2018/

17th Greater Houston Train Show. (Sponsored by the San Jacinto Model Railroad Club). Sat. 10:00 a.m. to 4:30 p.m. Adult $6, 12 to 18 $1, children under 12 Free. Stafford Centre, 10505 Cash Road @ Murphy Road, Stafford, TX.
More information: http://sanjacmodeltrains.org/

17th – 18th Great Texas Train Show. 10:00 a.m. to 4:00 p.m. Onsite Adult Admission is $2.00, Kids under 11 Free. Premier Events Center, Lakeland Plaza, 1165 S Stemmons Fwy, Lewisville, TX. More information: http://trainshow.com/greattexastrainshow/

24th – 25th SAMRA 42nd Annual Jamboree & Train Show. Sat. 9:00 a.m. to 5:00 p.m., Sun. 10:00 a.m. to 4:00 p.m. Adults $7, under 16 Free (limit 3) with paid adult admission. Garden Ridge Community Center, 9500 Municipal Parkway, Garden Ridge, TX.
For more information: http://www.samratx.org/shows.html.

March

17th – 18th Cotton Belt Historical Society, Tyler TAP Chapter Annual Train Show. Sat. 9:00 a.m. to 5:00 p.m., Sun. 10:00 a.m. to 4:00 p.m. Adults $7, under 12 Free. East Texas Fairgrounds, Harvey Convention Center, 2000 West Front Street, Tyler, TX.
More information: http://trainshow.com/greattexastrainshow/

April

7th TW TrainWorx 5th Annual Layout Festival. Sat. 10:00 a.m. to 5:00 p.m. $10.00 Single, $20.00 Family (Proceeds benefitting Ronald McDonald House of Dallas) 2808 McGowan St., Dallas, TX. More information: (214) 634-2965 or (877) 881-4997
or http://www.twtrainworx.com

5th – 7th 33rd Annual Sn3 Symposium. Contest, clinics, layouts and some of your favorite Narrow Gauge manufacturers await you and your friends. Sponsored by the Lone Star Region-NMRA. Registration $45.00 before February 1st, $55.00 after. Hyatt Place Dallas/Garland and Firewheel Conference Center Hotel, 5101 North President George Bush Highway, Garland, TX.
More information: bu1977@att.net, www.2018Sn3Symposium.com or call (214) 507-7779

May

5th – 6th 2018 Austin Area Train Show. Sat. 10:00 am – 5:00 pm, Sun. 10:00 am – 4:00 pm. Adults $7, children under 12 free with adult. Clinics and self-guided layout tour included. Williamson County Expo Center, 5350 Bill Pickett Trail, Taylor, TX (just minutes past Dell Diamond). For more information: trainshow@austinrailway.org or https://austinrailway.org/trainshow.

Excursion Train Trips
Austin Steam Train; Cedar Park, TX; (512) 477-8468; www.austinsteamtrain.org
Grapevine Vintage Railroad; Grapevine, TX; (817) 410-3185; www.gvrr.com
Old Hickory Railroad; Jackson, LA; (225) 634-7397; www.louisianasteamtrain.com
Texas State Railroad; Palestine & Rusk, TX; (888) 987-2461; www.texasstaterr.com

Please consider our deadlines for submittals and publications to allow adequate lead time to correctly announce your event. Column submission deadlines are the 15th of January, April, July and October; publication of the Marker Lamp is the middle of the following month.

Electronics

...RRduino...

by Speed
www.TxNamib.com

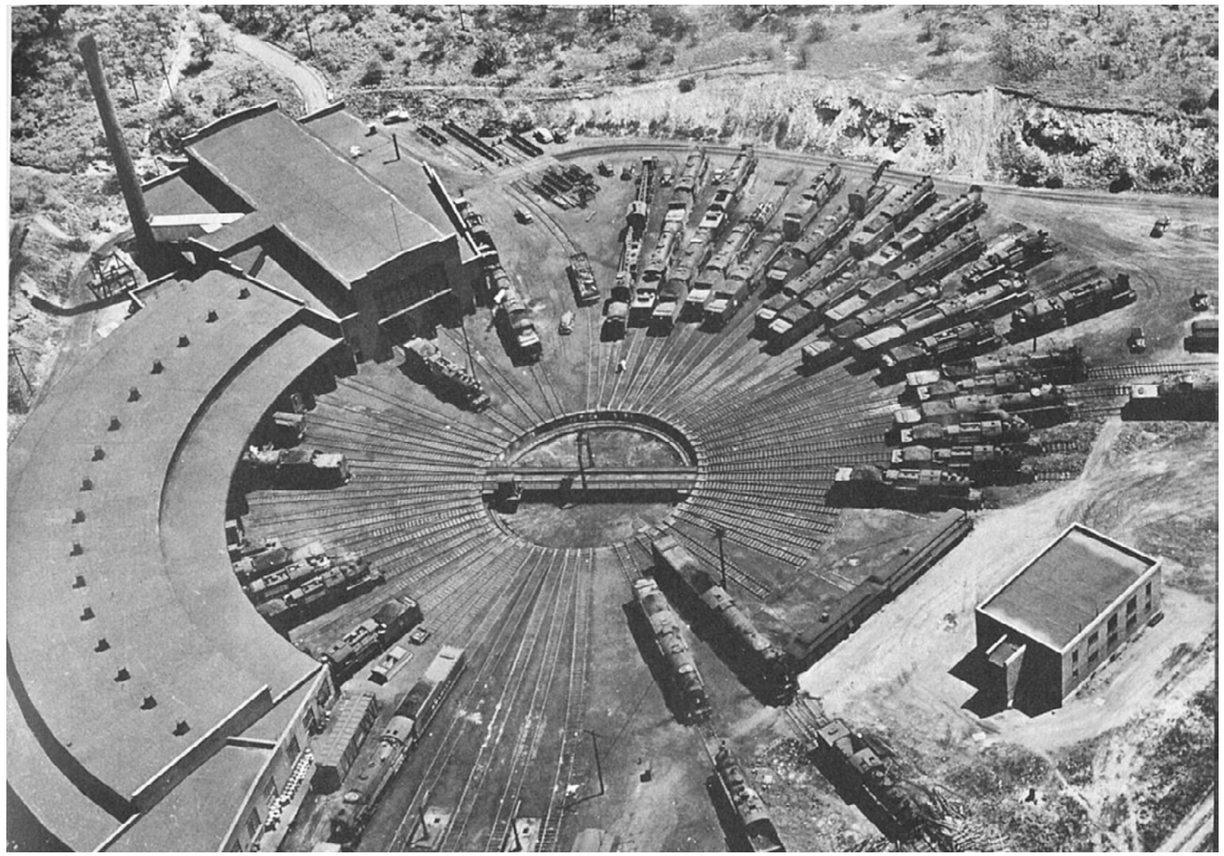


Photo shows how many tracks a prototype fit into a turntable. Photo by Unknown - Allentown PA Bicentennial - Lehigh Country Sesquicentennial 1962 Commemorative Book https://commons.wikimedia.org/w/index.php?curid=38251860

Stepping the two-step with stepper motors!

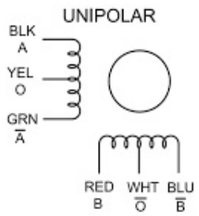
Maybe a little out of my league since the TxNamib Railroad does not reach far enough south to connect to Luderitz, where the last, now unconnected turntable is. But a very good friend Chip Romig had turntable trouble and we decided implement two manual controls for "get it closer quicker" and then "align it perfectly, going slower, smoothly" using an Arduino.

Of course, people who has the turntable as the main focus point, want to have better control, including sensors to align the table, but certainly has spent the time setting it up and calibrating it. And quite a number of times doing it again, which is where Chip decided to let the operator do all the alignment work himself.

So here it is, the crude two center-off-toggle switch solution to move a stepper motor faster with the first toggle and then slower with the second, so you can align them by eye-sight, like I've seen them do in Durango.

```
/*
 4 inputs, pulled high internally. Clockwise, counterclock-
  wise and another set for going even slower.
 Cycle through the states to turn the stepper clockwise or
  in reverse for ccw, using the 4 output pins to drive the
  FETs turning the coils on with the correct polarity.
 LED flash every 2.5 seconds or faster depending on
  which mode it is in.

  Author: Gert 'Speed' Muller
  2016.03.28
*/

#define VERSION "Stepper r004"
#define LED             13
// 4 Stepper motor pins:
#define P1              4
#define P2              5
#define P3              6
#define P4              7

#define DELAYBETWEEN      3
#define DELAYBETWEENMAX   20
#define DELAYPIN          5

#define TIMETOCHANGE    2000

unsigned long before  =  0;
unsigned long now     =  0;

int timestep =   DELAYBETWEEN;
int readByte =           0;

// which pin is being toggled
int state =              0;

// bigger than zero to avoid divide by
zero, see LED toggle later
int mode =               1;

// The setup function runs once when
// you press reset or power the board
void setup( ) {
  pinMode( LED, OUTPUT );
  digitalWrite( LED, LOW );
  pinMode( P1, OUTPUT );
  pinMode( P2, OUTPUT );
  pinMode( P3, OUTPUT );
  pinMode( P4, OUTPUT );
  digitalWrite( P1, LOW );    // turn pin off
  digitalWrite( P2, LOW );    // turn pin off
  digitalWrite( P3, LOW );    // turn pin off
  digitalWrite( P4, LOW );    // turn pin off
  Serial.begin( 115200 );
  Serial.println( VERSION );

// need a GND pin on the same side as the A1-4 inputs
  pinMode( A0, OUTPUT );
  digitalWrite( A0, LOW );    // so drive it low.

  pinMode( A1, INPUT_PULLUP );  // CW slow
  pinMode( A2, INPUT_PULLUP );  // CCW slow
  pinMode( A3, INPUT_PULLUP );  // CW slower
  pinMode( A4, INPUT_PULLUP );  // CCW slower

  // check inputs on startup, no real
  // other use, just debug!
  if ( digitalRead( A1 ) != HIGH ) {
    Serial.println("A1 LOW");
  } // if
  if ( digitalRead( A2 ) != HIGH ) {
    Serial.println("A2 LOW");
  } // if
  if ( digitalRead( A3 ) != HIGH ) {
    Serial.println("A3 LOW");
  } // if
  if ( digitalRead( A4 ) != HIGH ) {
    Serial.println("A4 LOW");
  } // if

  now = millis( );
  before = now;

  state = 0;
  mode = 1;
} // setup

void stepPin( char pin, char multiply ) {
  digitalWrite( pin, HIGH );    // coil on
  delay( DELAYPIN );            // wait
  digitalWrite( pin, LOW );     // coil off
  delay( DELAYPIN );            // wait
  delay( timestep * multiply );
} // stepPin

void counterOrClockWise( bool COUNTER, char multiply ) {
  if ( COUNTER ) {
    state -= 1;  // states decreases going counter clockwise
    if ( state < 0 ) state = 3; // roll under goes to 3
  } else {
    state += 1;  // states increases going clockwise
    if ( state > 3 ) state = 0; // roll over goes to 0
  } // else
  switch ( state ) {
    case 0:
      stepPin( P1, multiply );
      break;
    case 1:
      stepPin( P3, multiply );
      break;
    case 2:
      stepPin( P2, multiply );
      break;
    case 3:
      stepPin( P4, multiply );
      break;
    default:
      state = 0;
      break;
  } // switch
} // clockwise

// the loop function runs over and over again, forever
void loop( ) {
  // sometimes you missed the VERSION,
  // so sending a '?' repeats it
  if ( Serial.available( ) > 0 ) {
    readByte = Serial.read( );
    if ( readByte == '?' ) {
      Serial.println( VERSION );
    } // if help
  } // if available

  // time tells if we need to toggle the LED
  now = millis( );

  // toggling the LED with a rate based on the mode
  if ( ( now - before ) > ( TIMETOCHANGE / mode ) ) {
    before = now;
    digitalWrite( LED, !digitalRead( LED ) );  // toggle LED
  } // if
  // look which pin is connected to ground and do the highest
  // priority one, clockwise slow, ccw slow, cw slower,
  // ccw slower, else do nothing
  if ( digitalRead( A1 ) != HIGH ) {
    counterOrClockWise( false, 0 );  // false:CW, 0:slow
    mode = 2;
  } else {
    if ( digitalRead( A2 ) != HIGH ) {
      counterOrClockWise( true, 0 ); // true:Counter, 0:slow
      mode = 3;
    } else {
      if ( digitalRead( A3 ) != HIGH ) {
        counterOrClockWise( false, 1 );  // false:CW, 1:slower
        mode = 4;
      } else {
        if ( digitalRead( A4 ) != HIGH ) {
          counterOrClockWise( true, 1 );  // true:Counter,
                                          // 1:slower
          mode = 5;
        } else {
          mode = 1;  // no button, flash LED slowest!
        } // else, not cw0
      } // else, not ccw0
    } // else, not cw1
  } // else, not ccw1
} // loop

// Sketch uses 3042 bytes (9%) of program
//   storage space. Maximum is 30720 bytes.
// Global variables use 240 bytes (11%) of dynamic
//   memory, leaving 1808 bytes for local variables.
//   Maximum is 2048 bytes.
```

The Stepper motor for the code above, has 5 or 6 wires, which can be controlled with the 5th or the 5th and 6th wire connected to Vs (s=supply) and then turning any of the 4 coils on by connecting the other wires to ground. Of course, not all at the same time, but by following the sequence diagram as shown in the motor's datasheet. This is called the Unipolar motor configuration.



STEP	A	B	Ā	B̄	O (Ō)	CW
1	+	+			+	↓
2		+	+		+	
3			+	+	+	
4	+			+	+	
1	+	+			+	

WHT and YEL gets connected to 12Vdc and BLK, GRN, RED and BLU is switched to GND when needed.

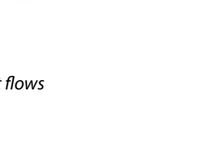
In the Bipolar motor configuration you only get 4 wires (see BLK,GRN,RED and BLU below):

PIN NO	BIPOLAR	LEADS	WINDING
1	A —	BLK	A
2	Ā —	GRN	Ā
3	B —	RED	B
4	B̄ —	BLU	B̄

FULL STEP 2 PHASE-Ex. .
WHEN FACING MOUNTING END (X)

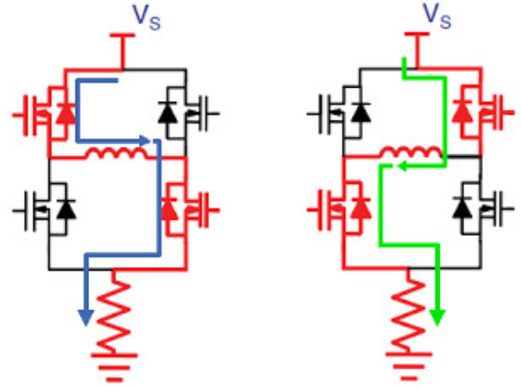
STEP	A	B	Ā	B̄
1	+	+	-	-
2	-	+	+	-
3	-	-	+	+
4	+	-	-	+

CW ↓ CCW ↑



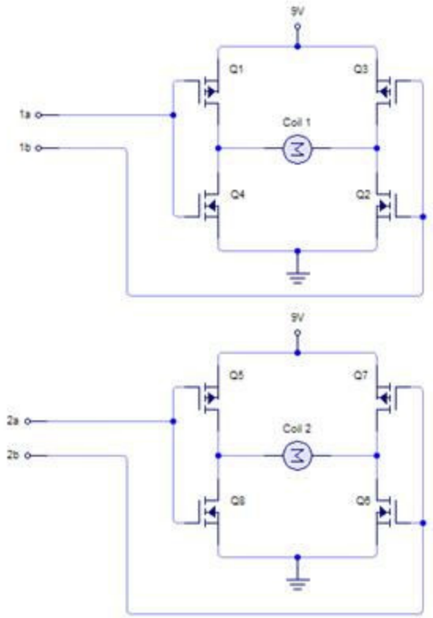
The polarity of BLK/GRN and RED/BLU is switched when needed.

To turn the coils on with current flowing in all four steps, you need to be able to control the direction the current through the 2 coils as well. This requires an H-bridge circuit ($0.15 on Ebay), and shown below:



One coil shown, blue and green for opposite current flows

ARDUINO™

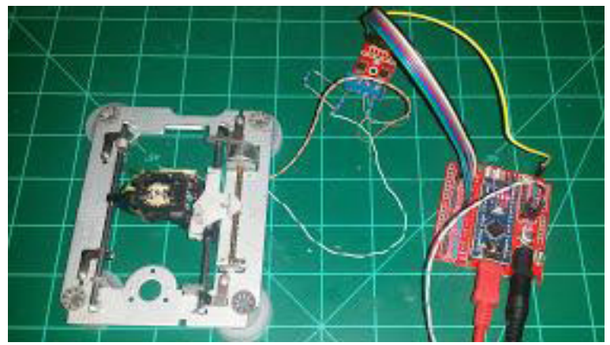


Two H-bridge circuit for less than $1

And here is a short sketch to control the Stepper motor in your floppy disk or CDROM drive in both directions:

```
/*
 2 inputs, pulled high internally. Clockwise/Counterclock-
  wise and On/Off.
 Cycle through the states to turn the stepper clockwise or
  in reverse for ccw, using the 4 output pins to drive the
  H-bridge turning the bi-polar coils on with the correct po-
larity.
 LED is on in the first phase (well for DELAY milliseconds)

  Author: Gert 'Speed' Muller
  2017.10.31
*/

#define Coil1A   4
#define Coil1B   5
#define Coil2A   6
#define Coil2B   7
#define InputPin A0
#define LEDPin   13
#define DELAY    50

unsigned int myPhase;

void setup() {
 pinMode( Coil1A, OUTPUT );
 pinMode( Coil1B, OUTPUT );
 pinMode( Coil2A, OUTPUT );
 pinMode( Coil2B, OUTPUT );
 pinMode( LEDPin, OUTPUT );
 pinMode( InputPin, INPUT_PULLUP );

 myPhase = 0;
 myStep( myPhase );
```

```
 digitalWrite( LEDPin, HIGH );  // flash with boot message
 Serial.begin( 115200 );
 delay( 100 );
 Serial.write("StepperFan 0.1..\n");
 digitalWrite( LEDPin, LOW );


} // setup

void myStep( unsigned int phase ) {
 digitalWrite( LEDPin, LOW );          // turn the LED off
 switch( phase ) {
   case 1: digitalWrite( LEDPin, HIGH ); // turn the LED on
        digitalWrite( Coil1A, LOW );
        digitalWrite( Coil1B, HIGH );
        digitalWrite( Coil2A, LOW );
        digitalWrite( Coil2B, HIGH );
        break;

   case 2: digitalWrite( Coil1A, HIGH );
        digitalWrite( Coil1B, LOW );
        digitalWrite( Coil2A, LOW );
        digitalWrite( Coil2B, HIGH );
        break;

   case 3: digitalWrite( Coil1A, HIGH );
        digitalWrite( Coil1B, LOW );
        digitalWrite( Coil2A, HIGH );
        digitalWrite( Coil2B, LOW );
        break;

   case 4: digitalWrite( Coil1A, LOW );
        digitalWrite( Coil1B, HIGH );
        digitalWrite( Coil2A, HIGH );
        digitalWrite( Coil2B, LOW );
        break;
   default:
        digitalWrite( Coil1A, LOW );
        digitalWrite( Coil1B, LOW );
        digitalWrite( Coil2A, LOW );
        digitalWrite( Coil2B, LOW );
        break;
 } // switch
} // myStep

void loop() {
 delay( DELAY );
 if ( digitalRead( InputPin ) == LOW ) {
   myPhase++;
   if ( myPhase > 4 ) myPhase = 1;
 } else {
   myPhase--;
   if ( myPhase < 1 ) myPhase = 4;
 } // if LOW

 myStep( myPhase );
} // loop

// Sketch uses 2400 bytes (7%) of program
//   storage space. Maximum is 30720 bytes.
// Global variables use 202 bytes (9%) of dynamic
//   memory, leaving 1846 bytes for local variables.
//   Maximum is 2048 bytes.
```



Who does not have an unused CDROM drive?

There are also three or four example Stepper motor sketches in the Arduino IDE's Example folder if you only need to control a single Stepper motor. Please try them all out. They use the local Stepper library, defined in Stepper.h to create a Stepper object with the number of steps you complete a rotation and the 4 pins connected to the Stepper, or the switches controlling the Stepper windings, example:

```
#define STEPS 100
Stepper stepper( STEPS, 8, 9, 10, 11 );

And in the setup( ) function they typically set the speed in
RPMs:
stepper.setSpeed( 30 );

And what follows in some form or fashion in loop( ):
stepper.step( numberOfSteps );
```

You can now add a potentiometer and either increase the position by stepping forward, or decrease it be step backwards with negative numbers, or keep stepping and change the speed with setSpeed according to the rotation of the knob on the potentiometer.

For controlling more than one Stepper, or need acceleration and deceleration, then AccelStepper would be a better choice.

Moving a Stepper back and forth with AccelStepper's bounce example:

```
#include <AccelStepper.h>
AccelStepper stepper;            // Defaults to the 4 pins on 2,3,4 and 5

void setup( ) {
 stepper.setMaxSpeed( 100 );       // set the speed
stepper.setAcceleration( 20 );     // set the acceleration
 stepper.moveTo( 500 );            // set the tar-
get position
} // setup

void loop( ) {
 if ( stepper.distanceToGo( ) == 0 ) // when it gets
there
  stepper.moveTo( -stepper.currentPosition( ) );  //
change the target

 stepper.run( );                 // make at most
one step, call this often
} // loop
```

Something you need to keep in mind, a call to the **Stepper**.step( ) function is "blocking", meaning that you will need to wait for that command to finish before you can do the next thing. Not important if you are simply commanding something scripted play by play, but if you also need to read an input like an Infrared TV remote control or an LCC command coming from JMRI, you might miss that completely while the Stepper code is "blocking". On the other hand, a call to **AccelStepper**.run( ); will only check if a step is needed, make a step and return, or if not needed, just return. In this "non-blocking" way, you can quickly check if a command was sent over the Serial, Infrared or CAN bus and process that command as well.

When the coils in the motor have a DC resistance of 9 or 25 Ohms, you can calculate that a 5 Vdc supply would need to deliver 0.55 A or 0.2 A (from I = V/R) and the Arduino board or chip by itself cannot provide that current. So the Vs pin on the H-bridge circuit need to go straight to a good power supply and not the 5 Vdc on the Uno or Nano board.

And now for a big change! We acquired Rrrduino.com, so if you venture over to blog.rrrduino.com, you will see all the model railroad Arduino projects pile up in there. This article and the code for it, will be under a recent post, so do a search for "stepper" in the search box on the site and you can copy or download the .ino file, from this page.

References:

Steppers:
http://reprap.org/wiki/Stepper_motor
https://en.wikipedia.org/wiki/Stepper_motor
https://www.lifewire.com/stepper-motor-vs-servo-motors-selecting-a-motor-818841
Arduino and Steppers:
https://learn.adafruit.com/adafruit-arduino-lesson-16-stepper-motors/arduino-code
http://www.airspayce.com/mikem/arduino/AccelStepper/
Smaller than average Arduinos:
http://www.instructables.com/id/Attiny85-as-a-StepDir-Stepper-Motor-Controller/
And math for the geniuses:
https://www.embedded.com/design/mcus-processors-and-socs/4006438/Generate-stepper-motor-speed-profiles-in-real-time

Oh, and a good guide for asking questions!

ML

Winter is Coming

By Duane Richardson, MMR
duane@purgatoryanddevilriver.com

"If you can't find time to do it right, when are you going to find time to do it over?"

In *Game of Thrones*, the Stark family motto is, 'Winter is Coming', and it is indeed right around the bend. It's that time of year when we look back at the convention with fond memories and begin to get ready for the fall train shows. As I have written several times, I am the worst at being able to get a project started on time. This year it bit me as I was unable to complete my contest entry model. I put in several long days doing nothing but working on it, but I just ran out of time. It was a glorious week of modeling but… there's always next year.

My workbench has been quiet since June, but now that the kids are back in school I'm ready to get back to work. So, as I clear the deck on my bench and figure out which project to tackle next, I'd like to talk with you a bit about a few 'little things'.

I'm not talking about the little things that gnaw at you like when people say gauge when they mean scale (it's not HO Gauge…it's HO Scale. Gauge is only the measurement between the rails. Scale defines the size of the models). What I'm talking about are the little things that you do to a model or to a layout that make them stand out. It's what wins plaques in the contest room, it's what gets merit awards and makes MMR's. It's what makes the people who visit your layout say, "Wow" when they walk in the door. Too often we are in a hurry and 'that will do' comes into play. We are in a rush to finish for an open house with full intentions to going back and fixing it later but later never comes or we are in a position of finally being able to build our first layout and we are so caught up in the 'I've got to get trains running' that we take shortcuts that end up costing is more time in the end.

The first little thing is to simply take your time and do the job right. Never let 'that will do' win the battle. If it isn't right, fix it now. One of my favorite quotes is, "If you can't find time to do it right, when are you going to find time to do it over?". It's a lesson, like so many others, that I've learned the hard way.

Another of the little things is weathering. I know some folks like their models clean and if that makes you happy that's fine. For me, a model isn't done until it looks real. Part of looking real is to show its age and it's wear and tear. It gives it character. It helps it look like it belongs in our dirty little world. A modelers weathering is like a fingerprint.

Over the years I've been lucky enough to become friends with some very talented modelers. If you set a box car from each of them on a table I have a better than average chance to telling you who's is who's solely by how it's weathered and the style or technique of weathering that they used. That's not a bad thing at all, but each of these guys will tell you why they do it the way they do and I've been blessed to have learned from each of them. My technique is theirs. All of them.

I do some things like my Dad. I do some like Gil Freitag, Chuck Lind, the Mitchell brothers, Al Boos, Steve Amitrano and so on. I guess a second little thing here is to take advantage of the friendships you have and learn from one another. That is one of the best things of our hobby is our willingness to share how we do what we do.

As a modeler who loves to learn more and to try new things, I don't mind a critique. This is another source where I've learned a lot because not only are they possible pointing out something I hadn't noticed but they will also share what they would have done differently and how. Now, I also know there is a fine line between a critique and nit picking.

I was asked by a modeler I respect if I would mind a critique on a model I had entered at the Narrow Gauge Convention in Houston. I was more than happy to get his opinion and was pleasantly surprised of what he thought of my work. That meant a lot. So much so we walked around the room throwing ideas back and forth on just about every model in the room. It turned into about an hour-long conversation that I learned a lot from. It was neat to see the room through his eyes and see what it was that attracted him to a model -what stood out for him. It reminded me that sometimes we should take a step back and look at a project from a different angle sometimes to see what's going on.

The next little thing would be to take advantage of the opportunity to visit other layouts. Even if they are in a different scale than you or a different gauge. Being a narrow gauge modeler I still go visit standard gauge layouts. You will be surprised what you can learn from what others have done. In fairness, you might learn how not to do something to.

I like steam locomotives, I like my rails a little closer together than most, and I really like them to be running through the mountains, but that doesn't mean that there isn't something to be learned from someone who builds in N scale in a modern city based railroad.

Buildings are buildings. Weathering is still weathering. Techniques to build the models and weather them aren't scale specific. Knowledge is power and it transfers from one scale to the next. I know a lot of modelers who are very good at what they do, but they won't go see a layout unless it's something similar to what they do. Now, if there is just too much to go see or do in a day then yes, of course, go see what interests you the most but for most shows you have a good chance of seeing more than just the one or two like yours.

The last little thing to talk about is the amazing amount of resources available to modelers today. Not just our friends or the books and magazines of before but now we have DVD's we can buy with clinics on how to build something or a movie of the prototype you model. We have the Internet where you can hook up with other modelers around the globe who model what you do. You can search and find all sorts of resources that you might not have known about.

A friend of mine is researching his project for prototype modeler, and he could find everything he needed but dimensions for the depot. Sadly, the plans were lost to time and nobody seems to have a copy. Luckily for him, he met someone online who lives there in town who was nice enough to go and measure it for him.

I was fortunate enough to find that when the Frisco scrapped their cabooses that the one my Grandfather, Father and Uncle had all worked out of for years managed to survive the torch and is setting in Rogers, AR.

On my drive back from vacation, I decided to make a side trip to Rogers where I got to visit a piece of family history. It was neat to spend time with something that had been a home away from home to members of my family for several decades. It added a couple of hours to the drive home but it was well worth the trip…and I still got home in time for *Game of Thrones*.

I say this at the end of each column but in all seriousness, I mean it. If you have something you would like for me to go over I'd be happy to. Otherwise, I'll ramble on about whatever I have going at the time or not like this column here. I will keep my sources private and not mention where one came from if you do want to send me something. I'm here to help. So, if you have something that you would like for me to cover, please feel free to contact me and I'll see what I can do about digging up some information. duane@purgatoryanddevilriver.com

Until next time, keep the boiler full, the fires hot and your wheels on the rails. ML

33rd Annual Sn3 Symposium

Thursday, April 5th to Saturday, April 7th, 2018
Garland, TX

www.2018Sn3Symposium.com

Contest, Clinics, Layouts and some of your favorite Narrow Gauge Manufacturers await you and your friends! Registration $45.00 before February 1, 2018, $55.00 after February 1,2018. for more information: WWW.2018Sn-3Symposium.com or email BU1977@att.net or call 214-507-7779

Symposium Hotel: Hyatt Place Dallas/Garland/Richardson Room rate is $119.00 plus tax. Call 888-591-1234 code G-SN3S

Sponsored by the Lone Star Region NMRA

ALL ABOARD

AUSTIN Eagle 2018

THE 2018 NMRA LONE STAR REGION CONVENTION

JUNE 13-17, 2018 · AUSTIN, TEXAS

Join us at the Wingate Round Rock Hotel and Conference Center!

We'll have:

- More than 60 **clinics and presentations** covering topics for beginners to advanced model railroaders
- **Layout tours and operating sessions** featuring more than 30 railroads in all scales
- Prototype tours including the **Austin Steam Train** and the **Capital Metro Dispatching Center and Maintenance Facilities**
- A huge **silent auction**
- A **contest room** that'll blow your socks off
- Fantastic **raffle and door prizes**

And that's not all!

*We're excited to have as our keynote speaker **Trevor Marshall**, long time model railroader, host of the **Model Railway Show** and **TrainMastersTV**, and frequent contributor to **Railroad Model Craftsman** and **Model Railroader**!*

Registration opens soon - check out our website for more details

nmra.org

AUSTINEAGLE.ORG

Andy Sparandeo

By Richard Kamm

SUE LINE

"He just loved trains."

Perhaps best known as the editor of Model Railroader Magazine, Andy Sperandeo was a fantastic modeler in his own right. Andy, when he was in the United States Army in the 1960's, was a member of the regular crew on the famous Gorre and Daphetid with the great photography and scenery master, John Allen. Later he attended the University of Texas at Austin, Texas which is where I first meet him.

One evening as I was climbing up the ladder at the Cat Mountain and Santa Fe Railroad of David Barrow in Austin, Texas, I heard a shouting match going on between David Barrow and Andy Sperandeo. I thought to myself "My God, what have I gotten into". They were "discussing" a fine point of operation. Later I learned it was all in good fun, but from then on, I tried not to push Andy Sperandeo too far.

Andy Sperandeo loved the Atchison, Topeka and Santa Fe railroad and built several accurately modeled Santa Fe stations. He spent much of his career researching and building a model of a section of the Santa Fe Railway as it traveled through Cajon Pass in California, northeast of Riverside, in 1947.

The railroad was magnificent and ran flawlessly. Andy's historical railroad models depicted the specific buildings and scenery of the time with track arrangements in which trains moved from place to place according to authentic timetables.

Andy Sperandeo was a detail man. Andy was a jovial outgoing man, but he had a quiet, modest side. He spent a lifetime transforming scenes of sprawling splendor into small wonders. His boyhood interest in railroads evolved into a passion for reducing their massive place and time in history into meticulously detailed miniatures — from trains, track, buildings and streets to vehicles, landscapes, water-ways and people. He rarely mentioned his own railroad, but wrote extensively about others.

In 1979, Andy Sperandeo became an associate editor of Model Railroader. This was Andy's dream job. It doesn't occur often that passion and occupation come together like this. He authored hundreds of articles, columns and reviews for Model Railroader Magazine. Through his position, Andy Sperandeo had an influence on literally thousands of model railroaders. Take one look at almost any part of Model Railroader's MRT layout, and you can see the influence of Andy Sperandeo. Track planning and operation were his forte.

He just loved trains. Whether it was model railroading or real railroading he had a tremendous knowledge and lengthy experience which led him to be equally at home driving 12 inch to the foot locos or operating on N-scale layouts. He had a wealth of knowledge about the history of railroading and was always ready to share or discuss almost any subject. Andy Sperandeo had a great passion for detail both in his modeling and in his life. Andy Sperandeo could make you feel a scene as if you were there. You could taste, feel, smell the scene.

Once, Andy and I were on a private plane headed from Dallas, Texas, to Los Angeles, California. Everyone in the group knew I was afraid of heights and had a fear of flying. Of course, I was seated facing the tail of the plane and across from Andy Sperandeo. We took off from Love Field and headed right over the center of Dallas- Ft. Worth International airport. It seemed like the plane went straight up. When we leveled off, the hot summer Texas air left us with quite a bumpy ride. Andy spent most of the first part of the trip wondering if I would find an air bag or deposit my anxiety all over him. Luckily, I did not damage his outfit nor our friendship that day.

Andy would always help fellow model railroaders, and the more it felt they were "sincere" modelers, the more he would help. Andy Sperandeo believed in the philosophy of "Teach a man to model, don't give him a model."

Andy Sperandeo will be dearly missed. ML

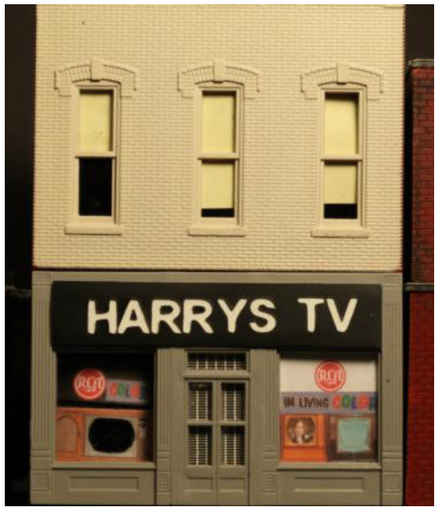
Dr Geoff Bunza

By Richard Kamm

SUE LINE

"soft-spoken, extremely patient, and helpful person"

Dr Geoff Bunza



Delta Lines boxcar

This time I want to share with you a "Giant in the Hobby" that I have never met but who has had a tremendous influence on me and a large portion of the hobby: Dr. Geoff Bunza. Dr. Bunza is a master in animation of planes, trains, vehicles, cranes etc. on the layout. He has had over 20-years' experience in electronic systems and software development, management, and entrepreneurial experience. He is also currently serves as Director of Cambridge Engineering and a former General Manager and Vice President of Mentor Graphics and Synopsys.

You probably have read one of his numerous articles in Model Railroad Hobbyist. In each article, this master animation specialist shows the project in detail. I have read and re-read so many of his published pieces gleaning new information each time. Dr. Geoff Bunza is a soft-spoken, extremely patient, and helpful person who I have communicated with numerous times by email as he patiently helps me through a project. Dr. Bunza loves sharing his techniques and tips in making the non-rail aspects of a layout come to life.

Some of his projects include any animated crane, building animation with a cool party, animating a sea plane, animating a conductor, virtual rooms for models, animating a passenger car, building a 17 feature DCC decoder for about $5, building micro-scenes, animating a grade crossing, building a TV set for a model building, eliminating car light flicker, DCC control for random building lighting, a working HO scale helicopter, an updated rough car handling system, Low cost DCC Controller/Function generator, working scale dynamometer car, and additions to DCC base stations.

His most recent project is Bob's Barber Shop which appeared in Railroad Model Craftsman of March 2017. Most of these projects can be found on YouTube.

In addition, Dr. Geoff Bunza has presented such articles as Harry's TV in which an OLED is converted into a TV screen playing shots of TV programs from the past, battery powered models in HO scale. Personally, one of the most enjoyable projects was the conversion of a keychain mp3 player into a Jumbotron for a softball field on the Sue Line.

That brings me to a couple of key points that I would like to share with you that Dr. Geoff Bunza reinforces through his projects. Animation comes in two forms: repetition and randomness. The proverbial circle of track around a Christmas tree is animation that is repetitious. The turnouts, meets, yard work, etc. are the randomness that make our operating sessions so much fun.

One of the keys of being able to maintain a commitment for weekly operations on the Sue Line has been the randomness by which the story unfolds. It is organized, it is recognizable, but nearly impossible to recreate two sessions alike. That makes the railroad feel alive.

Animation on your layout should attempt to the same. When one cannot recognize a pattern, then the action is always a surprise. Dr. Geoff Bunza, through the ingenious combination of the use of Arduino technology, applies the same theory to layout animation and I suggest you do the same.

Just like an operating session, as we deploy lighting effects, animation of motorized vehicles, etc., we have attempted to avoid recognizable patterns. Thus, at no time is the animation on the railroad "in sync" with everything else. The second item learned is to be judicious with the application of these items. At the end of the day, the animation of non-rail events on the layout should serve as background to the movement of the trains. It's easy to overdo.

Personally, what I've most enjoyed is being inspired to learn something new in the hobby. Time has taken its toll and I am not able to crawl as easily under the layout as I might have been a couple of decades ago to do maintenance. I suppose I could be mad about that fact, get bored, and drift away from the hobby. However, Dr. Geoff Bunza's projects have presented me with a new challenge that I can do and enjoy doing. Perhaps you can find a new aspect of the hobby that will keep you from being so stiff about where your railroad and skills are.

In short, Dr. Geoff Bunza has again made me feel animated about the world's greatest hobby. So I stand on his shoulders, just in a random way. ML

David Barrow

By Richard Kamm

SUE LINE

"...get up out of your chair and do something."

David Barrow

This time I want to share with you a "Giant in the Hobby" that has had a far-reaching influence on my journey through the hobby: David Barrow, an architect, developer, and business jet pilot who lives in Austin Texas.

David Barrow is a leader in minimalistic layouts and the developer of the "domino system" of layout design. David Barrow's railroad, the magnificent Cat Mountain & Santa Fe is over 40 years old, but has been presented in numerous configurations. The first version of the Cat Mountain & Santa Fe that I saw was a completely scenic and detailed layout with a beautiful backdrop which operated like a fine Swiss watch. When I returned in about six months later, it was again beautiful, but completely rebuilt.

This pattern of dismantling and rebuilding occurred several times over my numerous visits, but I noted at each re-build there was less and less complexity. The Cat Mountain & Santa Fe has been present in at least 16 versions to my knowledge. During these re-builds, David Barrow has evolved a minimalist layout. Many times modelers have said, "I can't do backdrops, I can't do scenery, I can't do structures, I can't lay track, I can't wire my layout", etc. David addressed these issues by minimizing their importance and showing that you can operate a layout without detailed scenery, without complex structures, with pre-built track and hand throws, etc.

David Barrow's main point was "get up out of your chair and do something." In the September 1999 issue of Model Railroader, David Barrow celebrate 25 years of the Cat Mountain & Santa Fe. For many years prior, numerous articles featured different aspects of enjoying operations and simplified building schemes to get a railroad up and running.

Over the years, you could see that David Barrow was encouraging people to get a layout up and running as the first focus. This would keep interest up for any modeler's railroad while they learned and practiced other facets of the hobby such as scenery, backdrops, weathering, etc. We took this lesson to heart on the Sue Line as the large mainline extension remained relatively bare from a scenic standpoint while we maintained our "fun factor" with weekly operating sessions. In fact, if you look closely at the Sue Line trackage from Northpark to the Alexandria area, you might catch glimpses of vaguely familiar track work.

David Barrow is a great lover of the Santa Fe Railroad and his layout depicts the barren west Texas region. David Barrow has studied in detail the actual operations of the Santa Fe Railroad and has duplicated them in the car and train movements on the Cat Mountain and Santa Fe.

David believes that designing a model railroad for operation begins with understanding the real thing. There are only a few locals and many through freights. There is plenty of yard operation to keep stationary yard operators busy. In my opinion, the crown jewel of the layout is the dispatcher's panel which uses parts from a real Santa Fe "Traffic Control System" panel, the Santa Fe name for a Centralize Traffic Control (CTC) panel, which David Barrow found in Amarillo, Texas, dis-assembled, and then transported to Austin. The panel was re-assembled and modified to fit the configuration of the Cat Mountain and Santa Fe. This panel was visited and written about in the August 2009 issue of Model Railroader.

In the "domino theory" of railroading, David Barrow proposed that all layouts can be reduced to simple units. In this system, any layout can be built from a series of standard length modules that David Barrow named "dominoes". In general, the modules were 48 inches long and 18, 24, or 36 inches wide. The idea behind this system was that the modules can be built, moved, re-arranged, and reconstructed with a minimal loss of previous work. Again, the focus was on helping people move past the arm chair phase of the hobby and on to working on a personal layout one domino at a time.

Through all of the iterations of the CM&SF, my visits, ongoing dialogue and shared operating experiences over the years, I was inspired to realize the fact that any layout is not, and probably should not, be static.

I was challenged by David to paint the fascia a different color on the Sue Line. We did.

His operations evolved over time with a willingness to look at the railroad differently each time even though the track work may be the same. We do.

The fingerprints of the CM&SF and David Barrow can be found on the Sue Line today. A nod given by a structure, a piece of rolling stock drifting downgrade at Crawley's Ridge, a transformed Summit switch lead still handling long strings of rolling freight cars, and operating sessions for months on end over track surrounded by sand scenery and not much else.

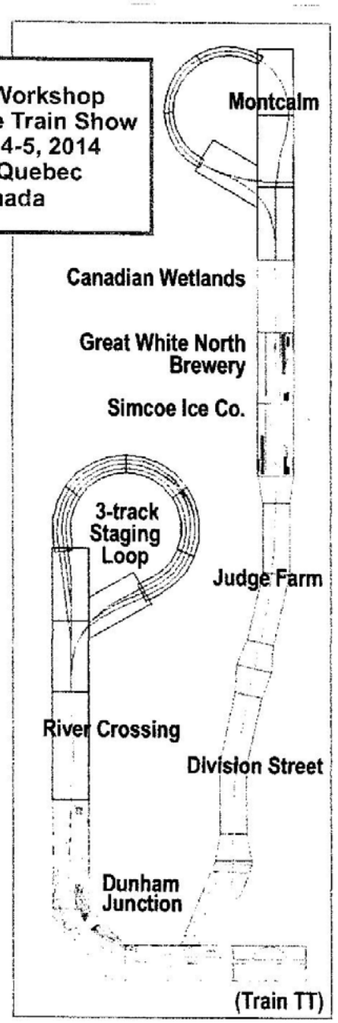
You can find David Barrow on the Sue Line layout in many places if you take the time to notice. They really are not meant to be homages to a good friend, but act as reminders that for me, he has had a giant influence on my personal journey through the hobby as well as so many others.

ML

WE BUILD A 4 X 6 HO SCALE LAYOUT!
Model Railroader
25 years on the Cat Mountain & Santa Fe
Pacific Electric: A railroad you can model
Detail N scale war emergency gondolas
How to move perishables
KEENER BOOKS & COLLECTIBLES PHOTO

See what's new
FREE-MO S SCALE

By Don Hand



Perhaps you are actively involved with Free-mo, or you're aware that scales and gauges other than HO have adopted the Free-mo concept and applicable standards as their own. I'd like to update you with interesting initiatives among the niche scale of 1:64 standard gauge, "S Scale". It's all good news!!

During the 1980's I was a member of Houston's NWX Club, and both our HO and N scale modular layouts were built to those scales' governing standards. Among other things, each scale specified the number of tracks and their distance from the front edge. Both NWX layouts featured continuous running, on bi-directional racetracks. For operating schemes see Track Planning for Realistic Operations, by John Armstrong, Kalmbach, 1963.

In the contemporary world of Free-mo, "modules" specifically meet the interface standard on at least one end, at their "interface plate", where they are 24 inches wide, with a single track on the center-line. (If it's double track, the end is 24 inches plus the track separation, with tracks located equidistant of the centerline.) Between interface plates, there can be "sections" (not "modules") of any length, width, and track location, which create "module sets". There is neither front nor back to Free-mo module sets. For more information on the Free-mo standard, visit http://free-mo.org/.

Earlier than Free-mo had evolved, S Scalers in New England and the Mid-West were building modules to interim standards that specified neither the width of a module, the number of tracks, nor any distance from the front; they only specified the separation between tracks, and the electrical interface. It was also amazingly flexible, since any module could be turned end-for-end, with no impact on electrical (DC) interoperability. Their modular layouts included wyes, both single and double track sections, as well as point-to-point operation. However these features did present an irregular front edge when displayed at train shows. By 1987, the interim standards were codified for the National Association of S Gaugers, and named "S-Mod".

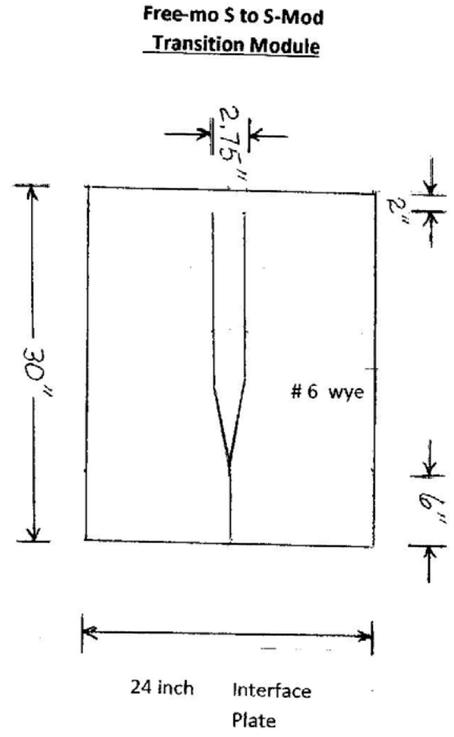


Figure 3

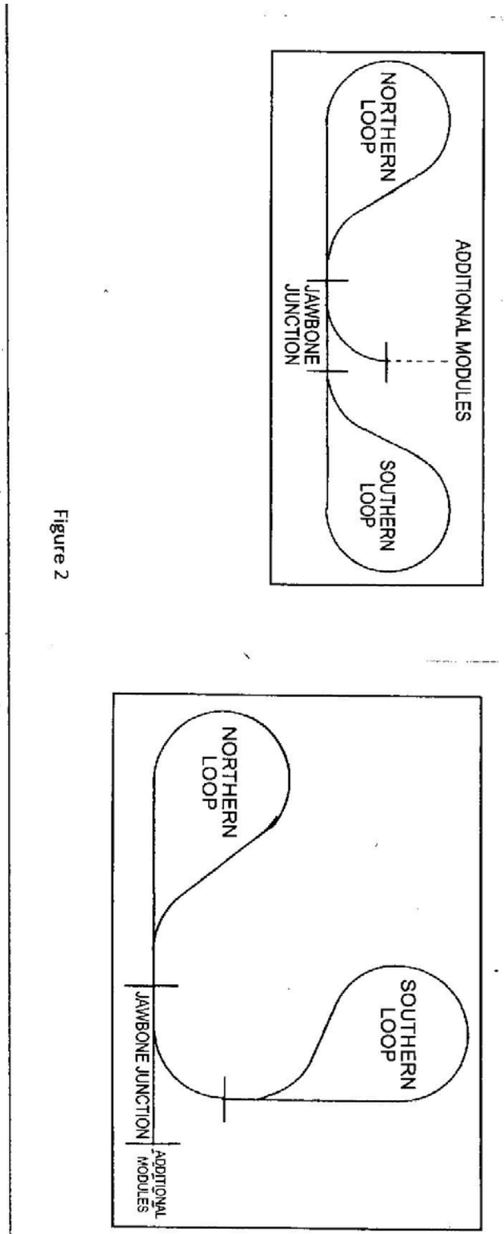


Figure 2

Houston S Gaugers (HSG) built their modular layout to S-Mod standards, in time for the NMRA National Convention, Astrorail, in 1989. Interestingly HSG's builders, led by the late Jack Troxell, opted to standardize on 24 inch wide modules, double tracked, with tracks located equidistant of the center-line. However the Freight yard and Passenger terminal sections are 30 inches wide, with

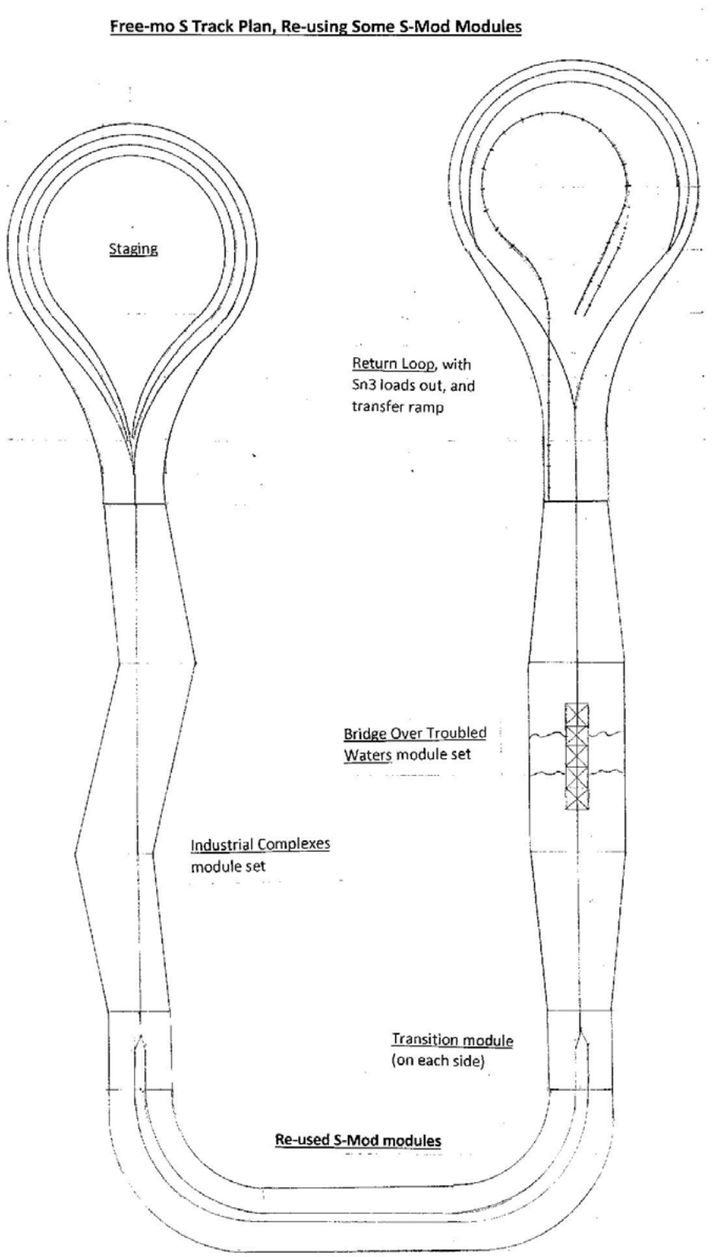


Figure 4

their double tracks curved away from the centerlines. You could make the case that HSG accurately anticipated the development of Free-mo S.

So, that was then. What's going on now? The Yahoo interest group Free-mo S was founded in 2005. Far and away the acknowledged leader among Free-mo S groups, and the one which has served as the inspiration for others, is the S Scale Workshop (SSW); its membership is centered in Ontario, Canada. SSW displays at many venues in their province, and occasionally in Quebec and in the U.S.

In recent years SSW has constructed two return loop modules; one is three tracks and serves vvas staging. The second loop (Montcalm) is particularly interesting as it includes a crossing and interchange, controlled at an interlocking tower. SSW trains operate from staging, point-to-loop and return, passing others at sidings and serving on-line industries with pick-up and set-out of freight cars. Please see Figure 1, for a SSW modular track plan with the two loops. Applying John Armstrong's Alphabet of Shapes, this one is a "J".

Dunham Junction in this track plan represents a useful module set. It is both a 90 degree corner and it provides an opportunity to either continue the route past the depot for a longer side, or take the turnout to make another 90 degree corner.

Perhaps it's the long Canadian winters that allow SSW members to build beautiful on-line structures and super-detailed scenery. You can view modeling with SSW at www. sscaleworkshop.blogspot.com, and see videos of SSW displays on YouTube.

A longer established club, the Bay Area S Scalers (BASS) is centered in the San Francisco Bay Area. BASS has parked their modular layout, built to the S-Mod standards during the 1990's; and they are now constructing Free-mo S modules.

Building on the successes and ought-to-haves that have been shared by SSW, members of BASS are building two club-owned loops. These are called Northern Loop, built by members living north of the Golden Gate, and Southern Loop, built by a member on the San Francisco Peninsula. Individual module sets are being built at several other locations in Northern California, and were brought together with the loops at the annual O Scale West /S West event, in May 2017.

For more information on BASS Free-mo S modules, visit www.bayareasscalers.org.

One key BASS module is "Jawbone Junction." Much like SSW's Dunham Junction, it permits layout designs that link the two loops on its straight side (Alphabet of Shapes form "C"), or via a 90 degree corner (form "V"). Please see Figure 2.

An interesting point about modular junctions was made apparent by Free-mo modeler Phil Doolittle's article, "Wheatland Junction", in NMRA Magazine, July 2014. His junction has an interface plate where that curve has completed only 45 degrees. This provides flexibility; because he also built a module that completes the remainder of a right angle corner, when needed. Note that each interface plate must have six inches of straight track on the centerline, therefore when his corner is at 90 degrees, it includes an 8.5 inch offset (that's my square-of -the-hypotenuse calculation).

vvvSo far we've looked at the work of an established Free-mo S group, and another that's catching up fast; what would be involved in converting some other group's existing S-Mod sections to a Free-mo S layout? In 1989, HSG came "close, but no cigar." Perhaps HSG could now save some key sections of the existing layout, such as: Two 90 degree corners; the double track wye and its stub end tail tracks (for staging, as in Armstrong's "riata" plan); and, industry-rich sections, like the icing platform with its widely separated double tracks. The key to melding those sections into module sets is to build "transition modules", as shown in Figure 3. Also see "Rethinking Modular Railroads", by Don Hand, NMRA Bulletin, April 1992.

Legs may present a challenge to this conversion, because the Free-mo S standard for track height above the floor is 8 inches higher than S-Mod. I propose that two existing wooden legs as engineered by Jack Troxell can be spliced into one longer leg (just look to a Medical Center, where patients' legs often receive a spliced-in replacement knee or hip).

Now let's consider a conceptual track plan that reflects "something old, something new, and" adds transition modules to unify these. Also, to add variety that will make this form "U" layout a lot more interesting, one loop includes a Sn3 right of way, with a narrow gauge-to-standard gauge transfer. Please examine Figure 4.

"How about that one, Sports fans!" Perhaps we can agree that an existing modular group need not put everything in the dumpster in order to embrace Free-mo S. I have come to believe, and perhaps you do too, that everything is possible in model railroading! Possibilities turn on our openness to innovation. For that reason, those who appreciate that the world has moved forward can also step forward to embrace new concepts, technologies, and realities in our favorite hobby. "Model railroading is fun!" ML

Credits:
Figures 1 and 2 were first published in The Dispatch, magazine of the NASG (used with permission)
Figure 1, photo by Trevor Marshall, track plan by Simon Parent
Figure 2, sketches by Michael Eldridge
Figures 3 and 4, sketch and track plan by the author.

Houston, Texas June 7 – 11, 2017

Contest Winners
BAYOU CITY LIMITED

By Loren Neufeld

Best In Show and 1st Place Maintenance of Way
Barry Bogs - D&RGW O M Rotary Snow Plow

Novice Best In Show, Most Popular Model, Best Kit-Built Model, 1st Place Displays/Modules
Leo Palitti - Skinner Row

Bob Clarke Logging Award, First Off-Line Structures
Pete Leach - Abandoned Shack

Most popular Complete Train
Leo Palitti - Logging Train

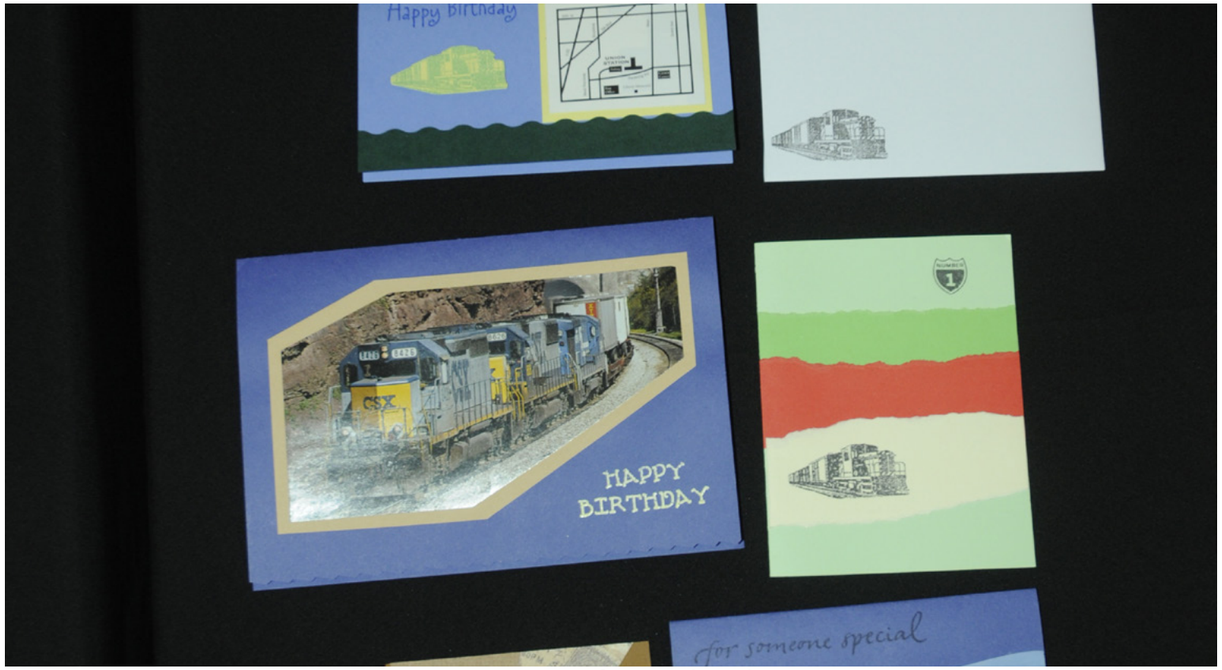
Youth & Teen Award
Nathan Lind - Lake House

Architecture Award, First Place Special Contest - Outhouse
John Romberger - Howard Johnson's Outhouse

Arts & Crafts – Youth & Teen Award, Arts & Crafts – Novice Best In Show,
Arts & Crafts – Theme (Bayou), Arts & Crafts – Best In Show (Tie)
Albany Wagner - Allie

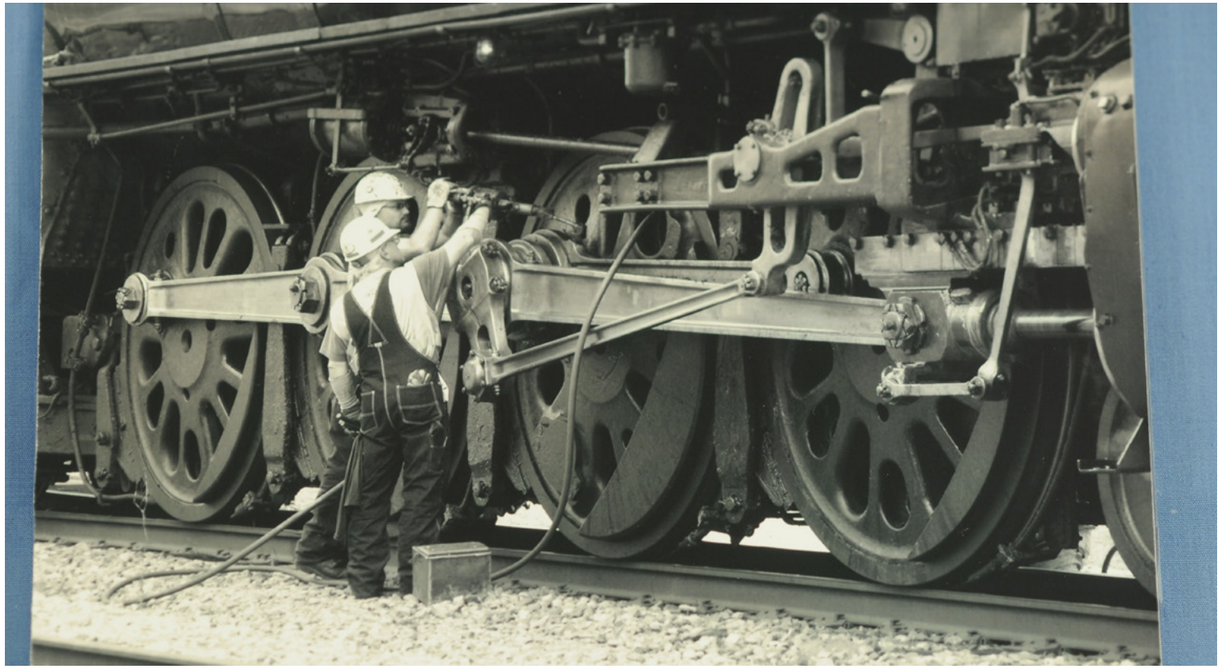
Arts & Crafts – Best In Show (Tie), First Place Arts & Crafts - General

Fredda McPherson - Hand Painted Rose Plate



First Arts & Crafts – Railroadiana

Darlene Dibble - Cards & Envelope



Photography – Best In Show, First Prototype Photographs - Black & White Prints

Tom Marsh - 844 Service Stop

First Prototype Photographs – Color Prints

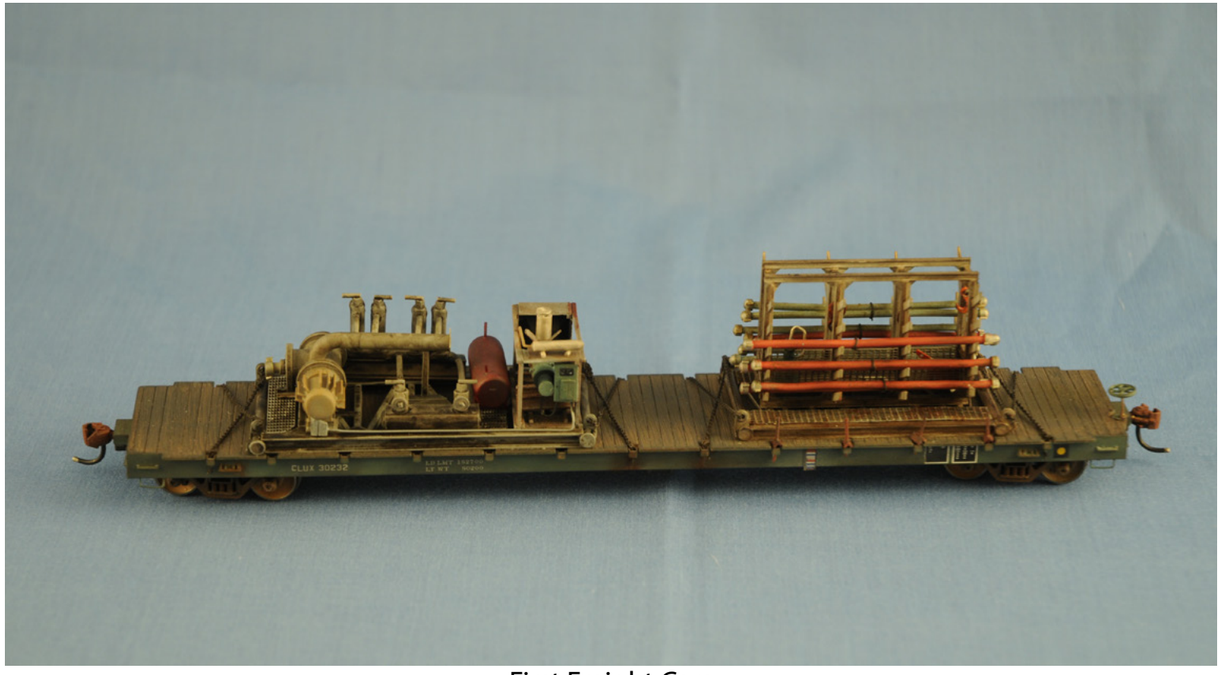
Blake Bogs - #7 at Night

First Model Photographs – Black & White Prints
Chuck Lind - Morning at Log Camp

First Model Photographs – Color Prints
Chuck Lind - Operating on San Miguel

First Diesel Engines
Steve Sandifer - ATSF FT408/430

First Passenger Cars
Steve Sandifer - RPO Baggage Car 2086



First Freight Cars
Bill Van Pelt - Oil Field Skids on Flatcar

First Cabooses
Steve Sandifer - ATSF #1901

On-Line Structures
David Grein - PRR Freight House

Bridges & Trestles
Don Winn - Oak Street Bridge

FULL CONTEST RESULTS – LSR 2017 CONVENTION

MODEL BUILDING

Diesel Engines

First	Steve Sandifer	ATSF FT408/430

Passenger Cars

First	Steve Sandifer	RPO Baggage Car 2086
Second	Steve Sandifer	ATSF T103

Freight Cars

First	Bill Van Pelt	Oil Field Skids on Flatcar
Second	Steve Sandifer	ATSF 99678 Tank Car
Third	Pete Leach	Reefer #65

Maintenance of Way

First	Barry Bogs	D&RGW OM Rotary

Snow Plow

Second	Blake Bogs	Flanger OK
Third	Keith Stratton	Rail Train

Cabooses

First	Steve Sandifer	ATSF #1901

On-Line Structures

First	David Grein	PRR Freight House
Second	Denny McGonigle	Dairy
Third	Dave Lamberts	Schramm Mfg

Off-Line Structures

First	Pete Leach	Abandoned Shack
Second	Lorrie Palitti	Yuck Brothers

Bridges & Trestles

First	Don Winn	Oak Street Bridge

Displays / Modules

First	Leo Palitti	Skinner Row
Second	Chuck Kind	Mcgonigle
Third	Lorrie Palitti	Rusty Keg

PHOTOGRAPHY

Prototype Photographs - Black & White Prints

First	Tom Marsh	844 Service Stop
Second	Eric Hershmann	Station Orders at Madelle
Third	Blake Bogs	315 at Osier Tank

Prototype Photographs – Color Prints

First	Blake Bogs	#7 at Night
Second	Jubah Rice	Paint Shop
Third	Laurie Lind	Navasota – We Have a Flat

Model Photographs – Black & White Prints

First	Chuck Lind	Morning at Log Camp

Model Photographs – Color Prints

First	Chuck Lind	Operating on San Miguel

Photography – Best In Show
Tom Marsh - 844 Service Stop

ARTS & CRAFTS

Arts & Crafts - General

First	Fredda McPherson	Hand Painted Rose Plate
Second	Judith Neufeld	Japanese Fairy Garden
Third	Judith Neufeld	Sea Garden

Arts & Crafts – Railroadiana

First	Darlene Dibble	Cards & Envelope

Arts & Crafts – Needlework

First	Sami Bohn	Scarf
Second	Cathy Ashcraft	Terminal Buildings

Arts & Crafts – Theme (Bayou)

First	Albany Wagner	Allie
Second	Lorrie Palitti	LSR Pillows

Arts & Crafts – Youth & Teen Award
Albany Wagner - Allie

Arts & Crafts – Most Popular Entry
Fredda McPherson - Hand Painted Rose Plate
Arts & Crafts – Novice Best In Show
Albany Wagner - Allie

Arts & Crafts – Best In Show
Tie Between
Albany Wagner - Allie
and Fredda McPherson - Hand Painted Rose Plate

Special Contest - Outhouse

First	John Romberger
Second	Kelly Russell
Third	Lorrie Palitti

SPECIAL AWARDS

Participation:
Steve Sandifer - 5 Entries – 498.5 Points

Best Kit-Built Model:
Leo Palitti - Skinner Row

Architecture Award:
John Romberger - Howard Johnson's Outhouse

Tree Award:
Kelly Russell - Outhouse Under Construction

Youth & Teen Award:
Nathan Lind - Lake House

Most popular Complete Train:
Leo Palitti - Logging Train

Bob Clarke Logging Award:
Pete Leach - Abandoned Shack

Linda S Little Award:
Lorrie Palitti - Rusty Keg

Most Popular Model:
Leo Palitti - Skinner Row

Novice Best In Show:
Leo Palitti - Skinner Row

Best In Show:
Barry Bogs - D&RGW O M Rotary Snow Plow

2018 LSR Convention Special Contest

Your Contest Chairman, with suggestions from the "Peanut Gallery", has dug through a pile of old peanut shells and come up with a slightly nutty idea for this year's "Special Contest"!

The 2018 contest will be to build ANYTHING! There's just one catch - It must be built on a **peanut butter jar lid** (the 3 1/2" size). You can build whatever you want in any scale you want, but it must fit on the lid and not hang over the sides. (If you really wanna show off, you can even build it *INSIDE* the jar, but please take the peanut butter out first!) Engines, cars, structures, dioramas, etc., all are eligible. It can be as tall as you want (limited by the ceiling height in the contest room.) but nothing can stick out past the sides of the lid. We have a cylinder which we will slide over the model to make sure it conforms to the rules. For those in the larger scales, this will be a real challenge. You Z scalers might be able to build a layout!

Those are the basic rules, and the entries will be judged the same as other models, using the NMRA scoring and LSR rules. It can be in any category, so please let us know when you are entering that it is also in the "Special Contest".

Like last year, special awards will be presented to the First, Second and Third Place winners based on the highest scoring models from all categories. You have plenty of time for planning and building, so let's fill the contest room again. If you have any questions call me at 713-962-4035, or email me at Lorenmr@aol.com.

See you at the convention!

NOW AVAILABLE!

Color

Pike and Dealer Ads

Pike and dealer ads are now available in color for the same price! Share your railroad or advertise your business to others while supporting the Lone Star Region.

- **Do you have a herald for your railroad?**
- **Is there a unique feature?**
- **What is the name of your hotshot freight or crack passenger service?**

Let everyone know about it with a color ad!

Pike ads are $8 per year and dealer ads are $20 per year.

Payment should be made out to:
LSR NMRA

Contact Speed Muller
treasurer

Ads can then be sent as a JPG file attached to an email to:
rileytriggs@gmail.com

CCMRC 60th Anniversary Club Car

Order Form

The Crescent City Model Railroad club in Metairie, Louisiana still has a few of its Accurail Crescent Lines 50 foot HO Scale boxcar that was made to celebrate its 60th Anniversary in 2016. It is available for a donation of $30.00 for each car, plus $6.00 shipping for the first car and $2.00 for each additional car ordered. It is available in one road number that commemorates the clubs founding in March of 1956. Extra decals are also available for just $4.00 per set. To place an order, please send your payment made out to CCMRC for the correct amount to:

Crescent City Model Railroad Club
601 N. Lester Ave
Metairie, LA 70003-6131

CRESCENT LINES

Quantity: _____ X $30.00 each

Total for cars: $ _____

Shipping: $6.00

Additional Shipping per car $2.00 ea $_____

Total Enclosed $_____

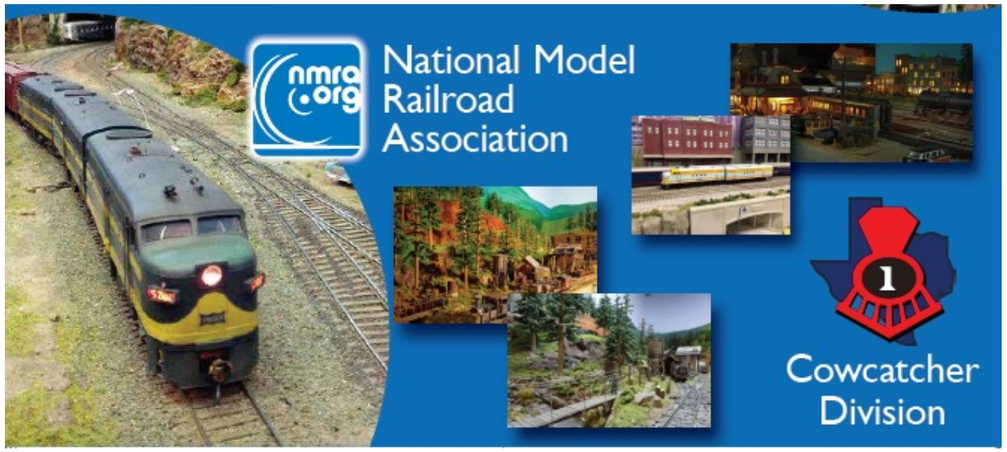
Thank you for supporting the Crescent City Model Railroad Club!

Director Reports

Cowcatcher Division 1

by Mike Mackey
director@cowcatcherdivision.org
cowcatcherdivision.com

Things are really starting to roll in the Cowcatcher Division. Our monthly meetings, which are open to everyone, are held on the second Saturday of each month at the Texas Western Model Railroad Club at 6808 Forest Hill Drive, Forest Hill, Texas 76140. Since our first meeting in May, we are averaging between 30-50 individuals per meeting. We've begun having a series of clinics, some of which have been make and takes.



The division has applied for and received our 501(c)(3) status from the Internal Revenue Service, which allows us to carry forth a new range of initiatives beyond just education and the enjoyment of trains. That document also grants, and I quote "Organizations exempt under IRC Section 501(c)(3) are further classified as either public charities or private foundations. We determined you're a public charity under the IRC Section listed at the top of this letter." (That statement was taken directly from a standard form letter issued by the IRS to all organizations like ours.)

To that end, we have established the Cowcatcher Division Hurricane Relief Fund. This charity helps victims of Hurricanes Harvey, Irma and Nate. Details of the charity, how it is administered and how you can help are located via the link on the division website: www.cowcatcherdivision.org. Speaking of the division website, if you haven't checked out the website, you owe it to yourself to make a visit! Our division webmaster, Mike Corley, has done a fantastic job of developing a SUPER site. It's chocked full of information, a modeler's forum, event calendar and much, much more. Spend some time there… you'll be glad you did.

The Achievement Program is picking up momentum in North Texas as well. In October the following individuals earned the following AP certificates:
Dave Griffith – Volunteer
Leo Palitti – Scenery and Structures
Lorrie Palitti – Scenery and Structures
Mike Ross – Scenery (Mike also has had several structures and cars judged toward those certificates as well; keep up the good work!)

I understand that we've got several other members that are finalizing their work on other certificates for submission. Stay tuned for an update in the next edition of the Marker Lamp for a list of those members who've attained Achievement Program certificates. Be sure and pass along congratulations to those who have earned these recognitions.

After several discussions with the leadership team of Division 3, and in an effort to become more self-sufficient, Division 1 has taken steps to purchase some new full color banners for use at local train shows and recruiting events. The photo above illustrates our new horizontal banner. We also have two vertical banners along the same style with different photos. We anticipate that this new look and feel will serve us well for the next several years to come. Along that line, we were able to get several new members at the recent North Texas Council of Train Clubs Fall Train Show in Plano. We welcome those members to our organization!

Finally, we'd like to extend an invitation to any of the members of the region to join us at our annual Christmas party to be held on December 9, 2017, at 6:30pm, at the Texas Western Train Club (address above). We will be having a pot luck dinner with the division supplying a turkey and ham, awards, an exciting gift exchange and a huge prize giveaway.

We'd love to have you! If you can attend, which we hope you can, please let us know by sending an RSVP to director@cowcatcherdivision.org. We can also try to arrange a discounted rate for overnight accommodations if needed for out of town guests. Just remember, you can't win any of the super prizes if you don't attend!! See you there.

Until next time…Keep training!

Bayou Division 2

by Rod Fredericks
fredericks.rod@gmail.com
225-939-0187

No report.

North East Texas Division 3

by Donna Orr
dlo-rls@sbcglobal.net
972-342-8598

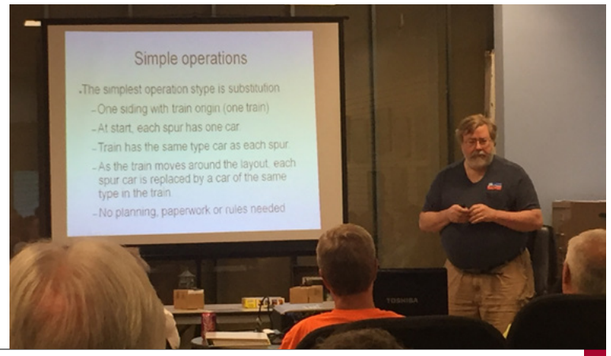
This quarter we had some very interesting educational clinics. We are fortunate to have Bill Fritz there to video all of our clinic presentations. In August, Marc LaChey presented "How do you fit more Stuff onto a small layout". Marc showed us how he designed and built an Oil Supply Facility for his Sn3 layout (below).

And we also always have show and tell. This month one of our members, Wayne Kelly's daughter decided to paint some rolling stock. Interesting, right?

September was another interesting monthly meeting. Going back to basics with, giving us more "how too's" on updating and restoring old rolling stock (below).

And every month we are fortunate to have Discount Model Trains of Dallas, give us gift certificates for their train store and they are distributed through a drawing, "Deal or Duds" lead by Larry Swigert (below).

Most months we meet at a church location in Allen, Texas, but the month of September we went to the Texas Northern Model Railroad Club, which has their location inside the Collin Creek Mall. Thomas Stevens and some members of the club demonstrated how to set up a railroad for operations and then there was an operating session after the meeting on their HO layout.


Simple operations
The simplest operation stype is substitution
One siding with train origin (one train)
At start, each spur has one car
Train has the same type car as each spur
As the train moves around the layout, each spur car is replaced by a car of the same type in the train
No planning, paperwork or rules needed

While there I noticed that an N scale layout had been donated to the club. Here are a few pictures of that layout, it was really detailed and very interesting.

There is so much more to write about, but with the pictures (1 picture=1000words) I'm already way over 13000 words. Until next time.

CenTex Division 4

by Peter Kazmir
pakazmir@gmail.com
CenTexNMRA.org

Things are busy in Central Texas – as always!

We had two Division meetups, in September and November. At the September meetup, Peter Kazmir gave a presentation on Railroad Traffic Control and Signaling Systems.

Afterwards, we toured Wayne Jones' HO and O Scale railroads, the Franklinton Crossing. At the November meetup, we watched a video presentation by Stephen Priest, MMR from the 2017 NMRA National Convention entitled Little Things, Big Difference. (If you haven't looked at all of the clinic videos on the NMRA web site, you should! They are a great benefit of membership!) At both meetups we also had a great collection of show-and-tell models. Afterwards, we toured Jack Merkel's excellent HO Scale railroad, the Lone Star & Santa Fe.

Pictures and detailed recaps from each meetup, as well as pictures and information about these and other layouts across our Division, are posted on our website, centex-nmra.org. The site also hosts a discussion board open to the public.

Our next meeting will be January 13 at the Austin Northwest Recreation Center. Details and directions are available at https://centexnmra.org/meeting.html.

Congratulations are in order for our very own Steve Jackobs, winner of the Railroad Model Craftsman/Dremel Kitbashing Award (as seen in the October 2017 issue of RMC)! He build a Reefer Service Car and it's top notch!

We are busy working to get the Austin Eagle – your 2018 NMRA Lone Star Region Convention - ready for flight June 13-17, 2018, at the Wingate Round Rock Hotel and Conference Center. The convention will include over 60 clinics and presentations, over 30 model railroads hosting layout tours and operating sessions, prototype tours including the Austin Steam Train and the Capital Metro Dispatching Center and Maintenance Facility, a huge silent auction, a contest room that'll blow your socks off, and more! And to top it off, we're excited to have as our keynote speaker Trevor Marshall, long time model railroader, host of the Model Railway Show podcast and TrainMastersTV, and frequent contributor to Railroad Model Craftsman and Model Railroader. Registration opens soon – keep an eye on your email inbox and our web site, austineagle.org.

The Austin Model Railway Society is also gearing up for operations, with phase 1 of their modular layout complete! They are also working towards hosting the 2018 Austin Area Train Show on May 5 and 6.

George Zapalac's LaGrange Station laser kit

JC's cars in progress

Steve Jackob's TOFC

Steve Jackob's paper concrete ramp

Tom Giruard's Mine

Finally, it wouldn't be the holidays without the Tinplate Trackers setting up their layout in downtown Round Rock, right across from the Library. The layout is open to the public between Thanksgiving and New Years – and admission is free!

We hope everyone has a safe and happy holiday season, with lots of trains under the tree!

Division 5

by Dave Lamberts
DavidWL1944@aol.com
806.792.7244

No report

Division 6

by Kevin Bergeman
kevin.bergeman@gmail.com
210.488.4370

No report

Division 7

by Don Kimmell
elf4kcs@mac.com
318.798.7718

First off, sorry bout missing the past couple of reports, I really have no excuse.

Now as to the future happenings around here. Tom White has had to disassemble the small display layout that was in the lobby of SciPort here in Shreveport. This is supposed to be a "short term" "re-boot" of the whole facility as they (think City) have brought in a "new" management team. The area where the display was located, was due to open on 16 October 17'.

The Holiday Express Elves have been hard at work preparing for this season run. The schedule was delayed a bit due to the impact of the hurricane in the southern part of the LSR. The adjusted schedule is:

Date	City	Address
24 Nov	Victoria	Hwy 59 & Burroughsville Rd
25 Nov	El Campo	Evans Park
26 Nov	Kendleton	KCS Intermodal Facility
27 Nov	Beaumont	KCS Yard 4095 S MLK Parkway
28 Nov	DeRidder	100 N Washington Street
29 Nov	Many	750 West Georgia Avenue
30 Nov	Mansfield	1004 Polk Street
1 Dec	Shreveport	KCS Yard, Gate 5, North Lakeshore Drive
2 Dec	Gonzales	Felix Avenue
3 Dec	Baton Rouge	KCS Yard, 1401 Foss St.
4 Dec	Pineville	901 Melrose Street
5 Dec	Coushatta	Front Street

All start times are 4pm. The only set ending time is in Beaumont, which is 9pm. Otherwise, we don't quit till the very last child get to see the Man-in-Red! Which sometime does make for a long night….like 9:30-10:00pm…Fun! The remaining stops are all north, ending in Kansas City's Union Station on 19 December. Hope to see some familiar faces this year, so come visit.

The folks over in Jefferson have had some success with a "swap meet" affair in October. I have not been able to visit, but I have heard some very positive feedback. Something to consider doing as everyone has some "spare, extra" stuff to play with.

That is all for now, I want everyone to have a Merry Christmas and a Happy Year. Let's all hope Santa is good to us and our loved ones this year. Go Play Trains!

Texas Gulf Division 8

by Jim Lemond
jimlem@verzion.net

To all members of Division 8 and the LSR, what an exciting Fall we have had in Southeast Texas. The San Jacinto Model Railroad Club hosted a great LSR Convention in Houston. The Door Prizes and Raffle were the best I have ever seen. Coastal Texas experienced a major hurricane with a 500-year flood. We hope all LSR and NMRA members are recovering well. At this writing, I have not heard of any layouts being destroyed, only a few receiving minor damage.

An invitation to all NMRA members to participate in the San Jacinto Model Railroad Club Annual Layout Tour beginning November 3, 2017, and ending on December 3, 2017. Each weekend will feature the best layouts in the Southeast Texas area (Division 8). All are free with one or two exceptions noted in the Tour Guide. The Tour Guide is available for download at: http://sanjacmodeltrains.org/resources/San-Jac-Tour-List-2017-Rev-0.pdf

For changes or updates to the Tour go to: http://sanjacmodeltrains.org/

Division 8 has continued its series of modeling clinics for model railroaders throughout the Summer and Fall in spite of Hurricane Harvey. We have had to change the subject of several clinics due to Harvey interfering with clinicians living conditions. Loren Neufeld, MMR presented a well-attended clinic on October 14th on how to add water to your layout. Please note the photos by Tom Marsh below.

Division 8 held its Annual Meeting and Picnic at Zube Park in North West Harris County on September 30, 2017. All attending enjoyed the hospitality provided by the Houston Area Live Steamers Club and the many train rides available. The hamburgers and hotdogs were cooked by Chuck Lind, MMR and Loren Neufeld, MMR, with desserts and chips provided by attending members of Division 8. Officers were re-elected to serve another term on the Division 8 Board of Directors. Re-elected were: Ray Byer – President, Chuck Lind - Vice-President, Loren Neufeld - Secretary, and Tom Marsh – Treasurer. Chuck Lind, MMR also serves as President of the LSR.

Nominations

by Blake Bogs
superchief15@yahoo.com

Well, welcome back!

I completely forgot once again to send in my report for the last issue. Let me fill you on the latest!

Before I fill you in, election season is coming up, which means it's time for nominations!!!! If you are interested in the position please email me ASAP! My email is superchief1520@gmail.com. The cut off is December 1st. I must have your bio by this date if you want to run. The positions that are up for election are: Vice President, Secretary, All 3 Director at Large Positions, Division 2 Director, Division 4 Director, Division 6 Director, and Division 8 Director.

The summer was super busy. Once school let out in May, I was trying to do as much model railroading as possible. My first plan was to build Flanger, OK. I had approximately 3 - 4 weeks to complete this model before the LSR convention arrived. For those of you that attended last year's convention, you are probably asking why I would build the same model again. Well, I challenged myself to build a completely scratch built model. I decided On3 would be the best scale to build the Flanger in because HOn3 is too small for me to scratch build in. The challenge was successful and I made it before my deadline. I finished my weathering on the flanger on Wednesday night of the convention week and got it in the contest room Thursday night. A little close, but hey, I made it!!!

In June, I attended a charter on the C&TS before the LSR convention. This charter was amazing! This was the first real photo charter I have attended. While I was in Chama, I made a few other notes for the OK. This helped when I came back home and painted the model. Two days after I arrived back home, the convention was occurring.

I was lucky enough to help with my dad's layout on Satruday and Eddie Carroll's on Thursday. The OK ended up placing 2nd, with my dad's rotary OM beating my model by two points. After the convention, I started my latest scratch build standard gauge car. I made it pretty far by the time August rolled around. I hope to finish the masters in December and have a completed model in January.

In July, I was lucky enough to go to Austin and attend the Division 4 meeting! If you haven't been to one of their meetings, I encourage you to attend at least one! They are hosting the 2018 LSR convention! The last convention they hosted in 2014 was amazing! If you haven't gone to a convention in Austin, you're missing out!

In August, My dad and I headed up the east coast to visit friends. We stopped at no less than ten museums along the way. These museums ranged from the St. Louis Museum of Transportation, to Steamtown National Park, to Spencer Shops. We also stopped by the non-function East Broad Top. The railroad shut down around 2011 and hasn't run since then. This is another Mecca for any narrow gauge steam fan.

Unfortunately, school has started again and my modeling progress is now at a standstill. So, let's move on to the last few months at Petticoat Junction.

Petticoat Junction: Petticoat Junction has been amazing the last couple of months. In May we had Chuck Lind and Lauren Neufeld give a clinic on writing up your model for the LSR or NMRA Contest Room. This was a great clinic showing how to avoid common mistakes when writing up your model. In June, Tuffy Henderson gave an amazing clinic on his layout, the TMS. Tuffy covered the history of his layout starting from the bench work to the current work going on. In July, Everett Lueck came out and gave us a clinic on the Southern Forest Heritage Museum in Longleaf, Louisiana. Everett showed photos from the past and present of the museum while talking about plans for the museum's future. In August, Chuck Lind presented a clinic on his trip up to Maine for the Narrow Gauge Convention in 2016. This featured Scranton, Pennsylvania Railroad Museum, Steamtown, and the B&O Convention. In September, I presented a clinic of my trip to New Mexico for the Cumbres and Toltec Charter featuring 315. In October, Don Formanek presented a clinic on his trip overseas to Ireland after the Narrow Gauge Convention. If you are ever in the area on the first Friday of the month at 6 PM, come join us! We meet at Valley Ranch BBQ in Spring, TX. Our open house will be November 3, 2017 from 6 - 8!

Well, that's pretty much it for now. Again, don't forget about the nomination period!!! If you are interested in a position please email me! Once again, my email is superchief1520@gmail.com. The cut off is December 1st. I must have your bio by this date if you want to run.

Again, the positions that are up for election are: Vice President, Secretary, All 3 Director at Large Positions, Division 2 Director, Division 4 Director, Division 6 Director, and Division 8 Director.

Until then, keep the trains running!

Treasurer Report

Treasurer
by Speed Muller
lsrtreasurer@huntatrophy.com
469-345-0022

A sincere warning first: there are thieves out there getting smarter and smarter every day, and you might not expect them to even notice that an association just got a new president and treasurer at the same time. So when an email show up like this, it takes some investigation to see that the return email address is not from the same person claiming to have sent it:

The little down arrow after "to me" will show that the "reply to address" is Chuck Lind <presidee41@yahoo.com>

What this prankster did not know when he tried this the first time in August, was that your current treasurer just completed his second term as PTA treasurer, where 1) we don't ever wire money in PTA land, and 2) every expense needs a budget account to expense the money to, an invoice and a signature from the board member in charge of that account requesting the payment. So when I was instructed by Chuck to wire $2450 to an Austin company maintaining our benefits, and it had to happen that day, I kindly decided to wait for the invoice in the mail!

The warning here is to guard your own money like gold and be careful who you reply to when reading any email! We are quite deep into the age of doing money over the internet, and it is quite hard to prevent it. Sending money to Nigeria is one thing, at least they have a juicy prince story, but when they try to blind side you with three quarters the truth, we need to be awake.

In the numbers below, you will notice that the Morgan Stanley CD does not show any interest...we are still trying to added me to the account (with Donna already removed) so I will report double interest next quarter, promise!

Second Fiscal Quarter of 2017/2018:

Beginning Balances (08/01/2017)	
LSR Checking Account	$28,279.16
Morgan Stanley CD Fund	$10,036.73
Beginning total LSR Net Worth	**$38,315.89**
(included in Total LSR Net Worth: Funds for the Bob Clark Award: $570, Division 2, 5 and 7 Rebate Funds: $225)	
LSR Proceeds	
Morgan Stanley CD Fund Interest	$ 0.00
Convention Per Capita Proceeds	$ 266.00
Marker Lamp Dealer/Pike Ads	$ 56.00
Total Proceeds	**$ 322.00**
LSR Disbursements	
Convention Non-Rail Activities	$ 214.69
BOD Meeting Expenses (recovering duplicate payment)	-$ 81.39
Total Disbursements	**$ 133.30**
Net Proceeds - Disbursements	**$ 188.70**
Ending Balances (10/31/2017)	
LSR Checking Accounts Total	$28,467.86
Morgan Stanley CD Fund	$10,036.73
Total LSR Net Worth	**$38,504.59**

2018

AUSTIN AREA TRAIN SHOW

Saturday May 5 10:00 am to 5:00 pm
Sunday May 6 10:00 am to 4:00 pm

Williamson County Expo Center
5350 Bill Pickett Trail - Taylor, Texas
Just minutes past the Dell Diamond!

Enjoy over 16,000 square feet of model railroading including:
Operating Railroads • Dozens of Vendors • Buy and Sell • All Scales • Raffle • Clinics
Self-Guided Area Layout Tour • Plenty of Free Parking • Refreshments Available

Admission $7
Children 12 and under FREE with adult!

For more information or for vendor tables contact trainshow@austinrailway.org or visit https://austinrailway.org/trainshow.html

Dealer Ads

B.E.D.T.

Lackawanna Railroad

Advertise your layout here
...*in color!*
contact
GERT "SPEED" MULLER
lsrtreasurer@huntatrophy.com

Pike Ads

B&O

Tall Pine Lumber Company

Tall Pine Lumber Company RR
West Coast Logging in On3
Chuck & Laurie Lind
3680 County Road 324
Navasota, Texas 77868
979-219-3305

Texas Western Model Railroad Club
6808 Forest Hill Drive, Forest Hill, TX 76140 (682) 587-2092
www.twmrc.org
Home of the Texas Western Train Show
Building New HO & HOn3 Layout
Clinics
100% NMRA
Memberships Open
Thursdays 7:00 PM to 9:30 PM
Saturdays 3:00 PM to 9:00 PM

BC&G
BAYOU CITY & GULF RAILROAD
New Members & Visitors Welcome!
How-to Clinics - Operating Sessions - Family Activities
N'Crowd Model Railroad Society
4007-E Bellaire Blvd., Houston, Texas
www.houstonNcrowd.org

Pennsylvania Railroad
Laurel Valley Secondary
Pittsburgh Division Circa 1957
Brady & Jane McGuire, Sherman, Texas
903-868-2726
Southwestern Pennsylvania in Texas O Scale

RED ARROW LINES

ATLANTA & ST. ANDREWS BAY RAILWAY
The BAY Line
THROUGH AIR-CONDITIONED SLEEPING CAR SERVICE BETWEEN PANAMA CITY, FLA., AND ATLANTA, GA.

GRIZZLY RIDGE R.R.
1881 Grrr 1889
The Bear-ly Make It Route
A 6' Division of the
Ark-La-Tex Modular Club
Tom White Haughton, La.

Cowcatcher
Magazine
March/April 2014
Getting the right shot
With digital photography, layout photos are easier to shoot but knowing the basics are still just as essential
SGMA: MAC makes an impression
Texas Central aims to be first high-speed rail in U.S.

All about the community of model railroading and rail enthusiasm!

Proud supporter of the Lone Star Region

Cowcatcher Magazine
www.cowcatchermagazine.com

ACME & MINERAL CITY RAILROAD
Bill Dryden
(469) 964-8571
Georgetown, Texas
bdr149@airmail.net
Life Member NMRA & LSR

JERSEY CENTRAL LINES

Pike Ads

NYD RY

MILWAUKEE SOUTHWESTERN
"THE LINDAS"
WACO, TEXAS

COWTOWN MODEL RAILROAD CLUB
(Formally the LMRA Railroad Club)
CMRRC
Fort Worth, Texas
An HO-scale, EasyDCC operating club rising from the ashes of a club that was forced to relocate and is in the process of constructing a new layout. Visit our website for membership and contact information.
Gold Rail Award Winner 2009, 2010 & 2013
www.cmrrc.webs.com

WEST VIRGINIA WESTERN
"THE SHINE LINE"
TAYLOR, TEXAS HO & 1-1/2" SCALE

GM&O

Rock Island

DAWCHA SOUTHERN RAILWAY CO.
IRON HORSE ROUTE
CHARLIE SPANGLER, PRES.
830-885-4515
2351 Rolling Creek
Spring Branch, Tx 78070-5656

SOUTHERN PACIFIC LINES

THE ALLEGHENY RAILROAD
HORSESHOE CURVE
ALTOONA
PRR
Jerry Schoenberg
Carrollton, Texas (972) 242-9053
arrjerry@aol.com

The Greater Baton Rouge Model Railroaders
www.dovetailstudio.com/trains

PRR

SC&W
Gilbert Freitag Houston, Texas

NEVADUN RAILROAD
Jim Packer
Colleyville, Texas 76034
817-514-7291
E-mail - jim.packer@sbcglobal.net
Website - WWW.NEVADUNRAILROAD.COM
RNDR

Advertise your layout here
...*in color!*
contact
Speed Muller
lsrtreasurer@huntatrophy.com

MID SOUTH RAILROAD CLUB
BATON ROUGE, LA
MEETINGS: EVERY TUESDAY @ 7:00PM
HO WALK AROUND WITH NCE-DCC
SANTAFE@TLXNET.NET

Deadline for submissions is January 15

The Marker Lamp

submittals and inquiries | rileytriggs@gmail.com